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PERRY



BIRMINCHAM



ABERRATIONAL AND SUBSPECIFIC FORMS OF BRITISH LEPIDOPTERA

BY

A. L. GOODSON & D. K. READ. W

FOR INTERNAL USE ONLY

Volume 9

Noctuidae Part 3

406572-200

Aberrational Forms

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Det. 215... p. I. Eunlexia stennens.

lucipara Linn. Syst. at. I/58. Ed. Io. n. 518.
subsp. britannica Turner. Ent. Rec. I943, 55. n. 89. (mis one sr connect)
" " # 3. 1028 Elling of the St.

subsp.britannica Turner. -- According to Turner the British form is on the whole lighter in coloration and marking than the Continental ones. See details in long description.

aberrational forms etc.

ab.conspicua Turner. Ent. Rec. 1943. 55. n. 90.

In the yellowish-brown subterminal area there is a Cark blackish red-brown line on the outer edge, this is bordered outwardly by a fine light brown line. In the upper costal portion of this subterminal area there are three very clear white spots, the remiform is large and conspicuously light.

e have the type in the R.C.K. collection, the three white spots mentioned are merely the paler than usual upper part of the submedian area being divided by the darker veins.

ab. maculata Lornko. Tijdschr. Ent. 1942. 95. n. 127.
The reniform unicolorous whitish-yellow or white, without dark centre.

ab. obsoleta Lempke. Tijdschr. Ent. 1942.85.p. 127.
Heniform stigna wholly filled with dark, hardly contrasting.

ab.flavescens Lempke. Mijdschr. Ent. 1942. 85. p. 127.
Submarginal band pale, yellowish, about the same colour as one remiders, the hindwings as a rule also a little paler.

ab.pallida Lomoke. Tijdschr. Ent. 1942. 35.p. 12/.
The whole insect paler; hear, thorax and central area with feeble libre cint; hindwings very pale grey, unicolorous.

ab. clausa Lemble. fijdschr. Ent. 1942. C. n. 127. (doscription vol. 82.0. 1 7) First and second bransverse lines join at the inner margin.

ab. somiconfluens Lemoke. Tijlschr. Int. I944, 85.5. I47. (description vol. 14 % I), the remiform and orbicular unit 1 by a louble line.

ab.azeripta Goznany. Yagn.baun.Tung.I947.I .o. 56.

Woct, 216. F. I.

Phlogophora Johs.

meticulosa Linn. Syst. At. 1758. Mt. 10.0.513. = pallida futt. Brit. Foct. 1892.3.0.53.

aberrational forms etc.

meticulosa Linn. typical form --- wings pale, the forewings flesh coloured at the base and with a fuscous triangle.
Tutt makes this the red form which, however, has a red triangle, not fuscous as Linnaeus states. Tutt's pallida is therefore the same as the Linnaeus type.

ab. suffusa farren. Seitz. I9II. 3.p. I90. The whole forewing is tinged with reddish, partially obscuring the usual olivegreen tints. There is no ground whatever for supposing that the red-suffused form is the typical form of Linnaeus and Maworth.

ab. roseobrunnea arren. Seitz. TyII. 3. p. 190. The central triangle rich red-brown, tinged with fulvous, the whole wing reddishtinged and the green shades all strongly mixed with reddish, the notathorau and dorsal tufts also being deep fulvous instead of green.

ab.ignicula Dannehl. Ent. 1.1926.19.0.168. In general agrees with rescobrumea Parren but in addition the last remnant of grey-green or green-clive is missing. The ground colour red-orange, hardly noticeably tened clive-grey(in the outer basal area). The markings, especially the triangles are not appreciably darker. This must be more extreme than rescobrunnea if the triangles are not very much darker than the ground colour.

ab. grisea Hackray. Lamb. 1938. 38. 5. 201. The green-clive parts have taken on a remarkable greyish tone, the rosy times are equally duller.

ab.viridescens Lempke. Tijdschr. Ent. 1942. F.J. p. 123.
Foreviags without any red or rosy tint, naridago of a beautiful dari grown,

ab. funosa Gockarne. Ent. Rec. 1951. 65.p. 158 & 169.pl. 5.f.5.
All the pale parts of the foreving and the antonion part of the thorax was slightly smoky, giving the aborration a peculiar dull amount as

to occupy the triangular area proximal to the elbowed line.

ab, westi Chalmers-Hunt. Ent. Lec. I)61.94.p. 262.pl.7 f.9.
On the fore ing the antemodian line runs from the costa, here or less vertically, to just short of the inner margin, instead of at an angle to join the postability, it is then continued horizontally above the inner margin for propostably form, thence turning at right angles upwards to arts the costa and in loing so forms a rough square, in place of the normal triangle. In the subscious regin there is a rather large roundish blotch of pule rellowish-built in which the marking are oblitorated.



od. 21. od. 21. od. 30. jel. od. 31. .

reduction in the second of the control of the contr

The control band strongly brown as I was to find the end.

on, withis Lemako, Mijoschr. Tht. I de, 65, 12 . The markings of the forewings want out.

ab. minor Cabsou. Nev. 30c. Ent. for, ISaj. Aj. 6.7. Very on All, 40 mm.

ab.flavescens Saundby. Ent.Rec.1963.75.p.85. The ground colour of the forewings pale yellowish-white, the usual markings present but pale clear yellowish-green instead of the usual pinkish or olive-brown. Outer margin and short bar below reniform stigma dark grey, almost black, in sharp contrast with the other markings. Hindwings paler than normal with usual markings showing up more clearly. The thorax and abdomen pale yellowish-white, the same as the ground colour of the forewings.



rectiliaca Esper. Eur. Schnott. 1788. 4. (27.5.37). 3.127 F.T.

aberrational forms etc.

rectilinea Esper --- typical form-- gray, with prominant black horizental streak above the inner margin, the middle area light grey simple of with column yellow, blackish on the cost...

Thore is no nertice of the necien area being filled with lark to more a band so it would seem to be the light form, set the deal's banded one moved the virgate fuct. Lemmas makes this virgate a synonym of the type, for no apparent reason,

ub. semivinguta fubt. Brit. bet. 1892. 3. 6. 96.
From a colour so in the bype but with the central area below the stignatus, including the black streak, bended as flor as she inner margin.

ab.grises Spulsr. Selmett, Eur. 1905. I.m. 207. Tithout the ochro-yello or brownish tints.

ab. juncta Lemka. Fijdschr. Ent. 192. Fj. n. 125. (description vol. Fl. n. 197). The remiform and orbicular join up but remain distinct.

ab. comiconfluence Lempho. Fijlschr. Ent. 1941. (j. n. 126. (description vol. 74. n. 1,7). Instead of joining the stignate are united by a louble line.

Noct.218.

Thalpophila Hbn.

matura Hufnagol. Baslin Mag. 1766.3.p. 414.

= toxta Esper. Eur. Schnebt. 1787.4. (1) .- . 189. - 1.108 8.3-6.

= cychorea Fabr. Ent. Syst Enend. 1794.5. (2).5.57.

= connexa Hubner. Samml. Eur. Schnett. 1800-03. ml. 23 f. 109.

= prospicua Haworth. Len. Brit. IED9. n. 160.

aberrational forms etc.

natura Hufn. typical form -- it is almost impossible to separate the various forms (given as synonyms above) into abstrational forms as some authors have done. The prospicua of Haworth was an obvious error for "connexa" since he cites Hubner's pl.25.f. IOE, which has green forevings and foes not occur in Britain, but is next to connexa on the plate. Ha orth obviously meant to raw a to connexa, from his description of it.

ab.pallida Rebol. kov.Lapok. 1916.23.p. 109. Forewings pale grey and slightly marked. Hin wings whitish-yellow with only light grey traces of the dark marginal band.

ab.infumata Hofer. Verh.zool.-bot. Ges. Men. 1919.59.p. (139). The normal yellow black-margined hindwings are here unicolorous sooty-brown, somewhat as in tragopoginis and this fusting shows itself equally on the underside.

ab.variagata Lemoke. (nec.Dannehl) fijischr.Ent. 1942.65.p. 124. Ground colour of the wings black-brown with normal pale transverse lines (first, second and subterminal.) The form is not identical with ab.obscura Turner which lacks the subterminal line completely and looks more unicolorous. The name "variogata" was used by Dannehl in 1929 for a subspecies of matura and it is strange that Lempke should use it for an aberration. Under present rules, which exclude aberrations, it can however stand, although quite ridiculous.

ab. sanguinea Dannehl. Hitt. Tunch. Int. 3es. 1929. 19. o. 108. Very dark, intensely violet-red suffused. The paler spots or markings appear rosy-red, especially the stignata.

Described as an aberration of the subsp. variegata Dannehl but may well occur elsewhere.

ab.radiata ahlgren. Ent. Tidskr. T913.34.p. T65 f.T.
Forewings velvety black with a raddish mixture in the upper part of the contral area; transverse lines pure white, the outer one particularly sharp, the subterminal weak yellowish-grey. The veins on the costa and in the marginal field show white.

ab.wahlgreni Nordstrom. Svenska Fjarilar. 1940.p. 180. The ground colour brown-grey, the veins in the outer (marginal) field white. Lies the preceding ab. radiata but the with the ground colour pale brown-grey, palor than the type form.

See Lempke footnote in Tijdschr. Ent. 85.p. 125.

0.60

ab. obscura furner. Ent. Lec. 1933. 45. Jumpl. . (285). (See Julos Det. I. Al. 26 2. 1) Uniformly dark brown with a lighter inner line and the outer one whits except near the costal portion, the rest of the markings obsoluscent. The abignata bally indicated by slight black outlines. Described from the figure in Culot. This shows the subterminal pule rave line completely absent.

ab. trescoensis Richardson, Ent. Gaz. 1958, 9. n. 128 pl. 9 f. 12. This striking variety has the subtemminal area and the reminerastigua of a pale straw colour, in fresh specimens the pale areas contrast strongly with the dark fringes. Hindwing with the marginal band so pale as to be almost obsoleto.

ab. paradoxa Cockayne. Int. nec. 1952. 64. p. 191. pl. 8 f. 9. in the forewing the basal area is part; the area between the basal and antemedian lines is unicolorous dark chocolate-brown; the inner part of the median area is pale, but that part external to the orbicular and claviform stigmata and the whole of the marginal area is unicolorous dark chocolate-brown. Hindwing normal.

ab. conjuncta Lempke. Tijdschr. Ent. 1942. 85.p. 125. A dark streak runs from the claviform stigma to the outer line.

exigua Hubner. Sarml. Eur. Schnett. 1200-05. nl. 78. . . 552.

aberrational forms etc.

ab.fulgens Hubner-Gayer. Jamml. Eur. Schmett. 1828-32.pl. 168 f. 796. The figure shows the forewings strongly grey-brown, darker than Hubner's figure of the typical exigua. The hindwings dusted dark grey, with the veins prominently outlined in black.

We have specimens from England which agree with this figure.

ab. albimac da Dannehl. Mitt. Munch. Ent. Gos. 1929 19. p. 113.
The stigmata not yellow or yellow-red but whitish; in particular the orbicular appears prominent as a white circle.

ab.variegata Dannehl. Mitt.Munch Ent. Ges. 1929. 19.p. 113.
Darker, very variegated, mostly large individuals. Transverse lines sharply emphasized, blackish, distinctly accommanied by a pale line.

ab.decolorata Dannehl. Mitt.Munch Ent.Ges. 1929.19.5.113. The opposite extreme to the preceding. Almost markingless pale gray, the stignata standing out as even paler spots, without their surrounds being distinctly marked. Rarely there is a darker shot between the stignata.

ab. canior Strand. Arch. Maturg. I. I.J. 81. AII. n. I.J. 9.
Tuch greyer, forewing with the antemedian line on its outer side, and the postmedian on its inner side, strongly defined by black on inner area.

ab.pygmaea Rambur. Ann. Soc. Ent. France. I834. p. 384. pl. 8 f. 2. The author says this resembles exigua a little but is much smaller. The figure shows an insect of somewhat queer shape, looking like a Bryophila (Cryphia) but on the whole, a small rather mishapen exigua, the markings somewhat mixed or aberrant, this can be caused by pressure on the pupa.

foct.220. . n. I.

Acosmetia Stephens.

caliginosa Hubner. Samml. Eur. Schmott. ICO9. -15. ml. IGD 1. -74. = infida Ochs. & Troitschke. Eur. Schmett. ICO6. 5. (3) p. 226. " ICI6. 4. 5. 73. (non. mud.)

aberrational forms etc.

ab.litorea Freyer. M.u Beitr. I845.5.p. I63.pl. 479 f. I & Z. Resembles in size and colour Hubner's caliginosa. Thorax and fore sings of a dusty grey almost without marking, no trace of stigmata and weak traces of the three somewhat dark curved bands. Hindwings white-grey without bands and spots. This may possibly be another species but the coloured figures give the impression of caliginosa.

ab. stagnicola Duponchel. Hist. Nat. Lep. 1827.7 (I).p. III.pl. 107 f.ó.
This may possibly be an aberration of caliginosa, /arren in Seitz includes it as a synonym of the type which it certainly is not. The excellent coloured figure shows the shape and size of caliginosa with the fore thanks been given ith three darker transverse bands, the first at the base, the second in the middle followed by the subterminal. In his description Duponchel says there are two bands, the first very large extending from the base to the middle and the other, narrower, extending along the terminal border. In the figure this large basalmedian band is divided by a pale line to separate it into two bands. Duponchel says it is the same as stagnicola Treitschke, which however is an anomola form.

Woet.22I. p. I.

Potilampa Aurivillius.

minima Haworth. Lep. Brit. I809. p. 216, = arcuosa Haworth. Len. Brit. I809. p. 260. = duponchelii Boisduval. Ind. Meth. I829. p. 92.

aberrational forms etc.

minima Haworth. typical form --- female described first as reddish-grey with three pale stripes. The male, described as arcuesa, whitish-yellow with two transverse rows of minute fuscous spots.

Heydemann thinks minima Haw, is captiuncula Preitschte.

ab.lutoscens Haworth. Lep. Brit. 1909. p. 260. Forevings reddish-yellow, widely rufous at the margin.

ab, airae Freyer, wen Beitr. 1836.2.p. 109.51. Ib2 figs. I & 2. (fig. 3 ab.)
Forewings more variegated than the typical form. Distinct transverse lines and remiform outlined in dark. The coloured figures are a much deeper yellow than the "whitish yellow" of the type form, Treyer says the figures are so good as to need no description so the form is not made a synonym of the type.

ab.luciola Prochaska. Verh.zool.-bot. Ges. Vien 1920.70.m. (97). Tale which differs greatly from the type by its charmly marked shining connerted forewings, of which the middle area appears darker coloured.

ab. grisescens Lemoke. Tijdschr. Int. 194., 85.p. 91.
Male form. The ground colour of the forewings not gellog, but gregish, as the normal form of the female, the markings however, as feeble as in the normal unlo.

venustula Hubner. Boitr. 1790.2 (5).p. 78. ol. 10... = hybnorana Fabr. Ent. Syst. 1794.3(2)p.247.

aborrational forms atc.

Toct. 223. · p. I.

Stilbia Stephens.

anomala Haworth. frans. Ent. Soc. IF I2.p. 336.

= hybridata Hubner. Samml. Eur. Schmett. (Jeom). IEIE-I9.f. 497-498.

=stagnicola Treitschke. Schmett. Eur. IC=5.5(2).p. 258.

= anomalata Curtis. Brit. Ent. IE37. I4.p. 63I.

carren in Jeitz gives insularis Fuchs as a synonym but by the description it may well be another species.

aberrational forms etc.

Meristis Hbn.

Woct. 224. p. I.

trigrammica Hufn. Berl. Mag. 1766.3.5.408. = trilinea Schiff. ion Verz. 1775.p. 84.

= quercus Fabricius. Syst.Ent. 1775.p. 594. = notacula Fabricius. Mantissa 1788.2.p. 138.

= quercicola Gnelin. Linn. Syst. Wat. 1788. I. (5). 3. 4555.

aberrational forms etc.

trigrammica Hfn. typical -the ground colour grayish,

ab. evidens Thunberg. Ins. Succ. I784. I.p. 2.
The original description gives the colour as grey or jellowish.
Most authors give the colour as yellowish, or reddish-jellow, apparently accepting the second colour, since the grey form is the typical one.

ab. erubescens Turati. Fat. Sic. 1909.21.5.103.pl. 6.f. II.
The ground colour reddish, not greenish.
The coloured figure is apparently not good, the colour being brown.

ab.perrufa arren. Seitz. 1911. 3.p. 229.pl. 45 f. row I. The whole wing rufous, with the median shade absent or obscure.

ab. albescens Lenz in Ostheldor. Gelmett. Sulbayern 1927. I.p. 304. nl. 15 f. I°. Lightened to whitish. In the marginal field of both fore and hindwings there remains a darker shadow.

ab. semifuscans "Laworth. Lep. Brit. 1879. p. 249.
The outer half of the forewings from the middle shadow reddish-fuscous, the basal half normal lighter colour, reddish-gray.

398.)
ab.bilinga Hubner, Samml. Eur. Schmett. I800-03.51.45 f.217. (N. 3. Syst. Bearb. 2.f.)
= bilinga freitschke, Schmett. Eur. I825.5. (2).5.275.

= pallida-linea lutt, Brit, foct, 1991. I.p. 1-2. There is much confusion among authors over the figure in Hubner's Simul. Eur. Schmett.fig.217. Harrich Schafffer however makes it quite clear by refiguring the form in dyst. Bearb, 2. pl. 77 f. 398 and stating that the colours are quite incorrect in Mubner's figure, the basal helf of the middle dide is not during, a description then follows $-\frac{\epsilon}{2}$ brown-groy, lighter towards the margin of the margin of the two transverse stripes, the middle shaday very indistinct. The I). Treitschke refers to Hubner's figure and says it is too hard and bartly recognisable and then relescribes in as fullure -- "column rate and pay, which on the head and thorax is less, and on the fore sing more, purticularly after the first bransverse line, mixed with brown-red. Two distinct bransverse lines, both sallow in colour and with a brown streak in their middle, sometimes with a slight trace of a mindle shalow." Treitschke's bilines is therefore the same as Tubner's, Tutt gives a wrong translation of Traitschke's bilinea stating that the "streak" (referred to in the description as being situated in the middle of the wansverse lines, is a broad blad rith a dust brown shalls in the middle. Also that the colour is dark ashy-grey whereas droubsolds save "pale ashy-gray mixed with brown-rad", Tubt nanerus the form pullifu-lines. The bilines of Wibner from is brown-grey with two paler brains well with a odgeing the black transverse lines, the middle shader very indistinct,

*

Bright Mich Tu . Or sinds.

006,22°.

ab. obscura futt. Brit. Dec. 1891. T. . T'.

= bilinea Haworth. (nec. Hubner) Len. Brit. 180 y. j. 249. Inca. or be. Marin., or skings souby-gray with two straight striag.

Haworth cites the flig. 21/ in Hubner's Baral. Eur. schoott. The line late lark ash-groy in error by the artist, according to Harmich-Schulffer. The best form is therefore darker than the proceding bilinea Hom. In that realist is obscura, his description being --the most unicolorous and obscure worm, such a very dark smoky-gray or brown colour, generally with two transverse lines clearly marked, although the others are somewhat faintly traceable.

Ab. brunnea Lonz. Osthelder Schmett. Sulbayern. 1927. 1.p. 304 pl. 13 d. 20. This is little different from bilinea Hon. Lonz assumed that the colour of Hubner figure was correct and calls it "dark grey", sonarating his out brunned as being larkened to brown. The actual colour of bilinea Hon, according to Herrich-Schal. is brown-grey which is little different from "brown and hardly worthy of separation. It can stand, if desired, as being without the grey tint, latitude to brown.

ab. renata Lonz. sthelder Seimett, Sudbayorn, Iye7. I. 1994.
The remiform dark surrounded and therefore standing out distinctly.
Lens does not state whether the middle shalow is present or not, if it is, the remiform would be situated in its upper part.

ab.oculata lihan. Boc.Ent. I/17.32.p. ... The middle transverse line broadened in its upper part to form a lentil-shared mark, 9 mm. in length and I mm. in breadth.

This may be the same as the proceding since the name is oculata (sys) out by the description the mark is solid, a broadening of the actual line and therefore filled in with dark.

ab. basivoluta "ihan. Soc.Ent.1917.32.p.4.
The transverse streak, close to the base, united by a curve at the costa, with the first transverse line.
Turner gives a completely wrong translation of the this form.

ab. fasciata Krombach. Int. Int. 1, 1920. 13.9. 180. Foreving with strikingly broad middle band.

ab. approximans Haworth. Lep. Brit. I209.p. 249.
The description says the second and third lines approach each other at the inner margin. This must be a rare form unless Haworth means the antenodian and million shadow which is not likely. Many authors give the first and second lines but this is not correct if the original description be taken. Haworth calls all his forms "Troble Lines" he is therefore not counting the basal streak as a line.

ab.convergens filen. Soc. Ent. 1917. 32.p. 4.
The first and second lines united at the inner margin, so that the central line runs obliquely inwards.
Turner gives a completely wrong translation of this form.

ab quadrigrammica and. Osthelder Schnett. Sudbayern. 1927. 1.p. 304. The outer transverse line doubled. Lenz does not say whether or not the middle shadow is present but since the name is quadrigrammica it is assumed that it is and there are four lines in place of the normal three. Cockayne has described a form with the appearance of a louble outer line but actually this is with the middle shadow noved outwards close to the outer line. See nort form.

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ab.eccentrica Cockayne. Ent. Rec. T951.65.p. 160 pl.5 f.7.
On the forewing the basal, antemodian and postmedian are in their usual position but the median line, which is the same thickness as the others, is depolared outwards and runs parallel and close to, the postmedian, and lies some distance outside the discoidal spot, instead of running through it or just internal to it; the discoidal spot is just visible.

ab.fringsii Schultz. Soc. Ent. 1899. I3. p. 153. In place of the normal three transverse lines there is only one, strongly curved in the middle field of the forewing; from this line towards the margin there is some dark shadowing of broad expanse, which, however, stands out much less from the ground colour than the actual line. This transverse shadow does not reach the margin of the wing. For the rest the forewings are completely markingless.

ab. obsoleta Lemoke. Tijdschr. Ent. 1942.85.p.90.
The middle shadow line fails, the other transverse lines very weakly visible.
Lemoke gives a wrong translation of his Dutch description in the English footnote which reads—— the central shado fails, the other transverse lines obsolete.
It should read "obsolescent".

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		211			
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Toct, 225. . n. I.

Hydrillula Tams.

pallustris Hubner. Schmett. Iso3-08. nl. 7, 1. 5.7. = palustris Hubner. Verz. Schmett. ISL2.p. 20y. (spult sith one 1)

= exilis Eversmann, Bull, Soc. Mosc. I842.n. 848.

= lutea Broyer. Weu Beitr. ISA5. 5.p. IZI (luteola on ol. 455 f.5.

aberrational forms etc.

ab. lutescens Farren. Ent. dec. 1899. II.p. II4.
Forewings of a distinct and clear ochreous brown, without any of the gray of the type, having the basal transverse line, stigmata and transverse line beyond, more or less well-defined, but always without a trace of the subterminal shade..

ab.fusca Tarren. Ent. .cc. 1899. II.p. II.4. (arkings as in type but the basal two thirds of the Lordvings, so which auscous as to almost obliterate the basal transverse line and stigmets; this almost object coloration extents to, and is limited by, and transverse line beyond the rendiform the terminal third of the wing is typical but durker, and has the subtarnial shale.

ab, obscura Hormann, whith, lat, Ver. Stelerm. 1916, 72, o. 125. Take them trocks are the marginal strocks are the said form particularly clearly devoloped, whilst in the higher form they are searedly visible.

I have not seen the original deterintion.

ab. raebeli Dannehl. Thr. 1. 1925. 39. p. 12. The males very dark, unicolorous gray-black to brown-black, ith headly visible marking remnants; the females completely black with a strong gloss.

ab, abolata Guenec. Spec. Gen. Lep. Soct. TED. I. . 238.
Forewings of a clear ochraceous-grey, postbrod with bluckish, with the two indistinct median lines, the elbowed one toothod, and an indistinct collular shot all darker; the outer margin and extremity of the nervures were obscure. That they of a dirty white with small grey terminal lashes, without collular of the lowe but with a very small one below. Poscribed from a single specimen from thus in.

Caradrina Ochs.

morpheus Hufn. Berlin Mag. 1766.3.5.504.

Some authors include radica Esper Eur. Schnett. 1786.4(2).p. 497.pl. 154 f. ... but neither the figure or description are of morphous, the stignate are stated to be white. Terneburg says it is manthographa.

Farren gives bulla Beckwith. Trans. Ling. Soc. 1794. T.p. 5. pl. I. figs. 7-9. as a synonym of the type, and Turner as an aberration, but neither the figures or description fit morpheus in any way so it is not included here.

aberrational forms stc.

morpheus Hufn. typical form --- the forewings gellowish-brown.

ab. obscura Tutt. Brit. foct. I89I. I.p. I47. Forewings deep greyish-fuscous inclining to blackish, the darker stignate and transverse lines being comparatively inconspicuous owing to their being little darker than the ground colour.

ab. sepii Hubner, Samml. Eur. Schmett. I800-03.pl. 34 f. IóI. The coloured figure shows the forewings raddish-brown, especially in the molian area, the subterminal conspicuously white, probably an exaggeration on the part of the artist. Futt retains the name for examples with a raddish tint around the stigmata.

ab.ochrea Lenz. Ostholder Schmett. Sudbayern. 1927. I. p. 305. pl. 15 f. Ip.
Tore ungs pale yellow-brown, with indistinct marking.
The figure hardly agrees with this description, the stignature and substantial shade are most conspicuous.

ab.minor futt. Brit. Set. IS, I.I.p. I47. Very small, measuring only seven-eighths of an inch in expands.

ab. spalleki Kitt. Verh. zool. -bot. (#s. iien. 1917. 67.p. (198).
Posseses, with otherwise normal ground colour and marking, a darkened black-brown basal and marginal field of the foreging and black-brown fillud-up stiguit; the subterminal line stands out distinctly from the lighter, shining, brownish yellow-green ground colour.

ab, fusca Costni. Atti. Soc. Todena. (5) 3.p. IS. Ground colour very dark black-brown. Description from Seitz Suppl. by Draudt. I have not seen the original.

ab.punctosa Krulikovsky. Bull. Soc. Lat. Hosc. (IF93) IE94.p. 74.
Small, the orbicular a small point (nunctiform).
It is difficult to know the this form was named, whether it was for its small size or the small point in place of the orbicular, the orbicular being small in most specimens. It may well be a synonym of timer Tutt.

ab. drosnayi Lucas. Bull. Boc. Int. Trance, 1933. 38.p. 1933.
Fortings gray without reddish tint, the lines and markings fuseens. The select darker than the type form on which the markings angular dull.
The author say it is possibly a melanic variety so would appear to be much larker than the lescription implies.

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D. -- .

ab. semiconfluens Lerry to. fijischr. Ent. IS42. 25. p. 94. (1 emiption vol. Sc. 1.7.) Instead of joining, the stigments are united by a louble line.



alsines Brahm. Ins. Kalent. 1791.2. . 298.

aborrational forms etc.

ab. implexa Stephens. Ill. Maust. 1829. 2. n. 156.

Paler than the typical form, the forexings rusty or yellowish-grissous, its four distinct darker or fuscous striae, and greater undulation of the pale nesterior strigg.

ab. ochrea arren. Beitz. ISII. S.p. 200. Forevings, head and thorax pale yellov-schrous, the carb auditings tombing to become effaced.

ab. suffuse furt. Brit. Det. IS91. I.p. I47.
This is an hypothetical form and possibly does not exist. Butt says it is Guenee's var. A and gives Guenee's own description but instead of "blanches" (white) scales, futt gives black scales. Guenee's description as given by futt reads "The costs, we lian space, subterminal line and a line bordering the drings, strongly powdered with black scales.". Guenee himself says "white scales". It would be best not to use the name.

ab. serices 3 eyer. Stett. Hat. 1. In 67.2% n. 73.
The description is very long and involved. Lempks in Tijlschr. Hat. 15. p. 97 gives his conclusions and the main points of the abordation, having soon 3 eyer's type. It is distinguished by the yellowish-grey or pale brownish-grey for evings and very indistinct markings, the latter being the most striking character. He sings are said to be smooth and shiny. Lempke restricts the name to alsines, hallon has a 9 said to be of this form.

go, rudescens London. Mijlochr. Int. I, 4.. 85. p. 96. Ground colour of the forweings rollish.

ab. elegans Lemphe. Tijdechr. Int. 1942. (). 1.96. Vorovings clear yellow-brown, with sharely constructing marking.

ab. clausa Lumko. Tijlschr. Ent. I342, 85. p. 97 (absuription vol. 82. p. I/7.) The first and second transverse lines join at the inner appoin.

7000, LEP. .

Caracrina Jens.

so mutional forms she.

blanda Schiff. typical form --- uninormly receish-gray, the sengues and subterminal line outlined in paler colour.

ablegens Haworth. Lem. Brit. 1909. 7.206. Forevings fuscous, otherwise similar to the preceding reducts, the subterminal narrowed or obsolescent. Futt also alters this description in saying that the markings and stignata are distinct, Havorth says it is similar to reducts in which the markings are obsolescent.

ab, sordida Haworth. Leg. Brit. IEOG. p. 207.
Futt includes this as an abstration of planda but the description my apply to anything, the forevings bull reddish, with two obselescent stripes. Futt's our description is reddish-brown with indistinct stigmata and transverse marking.

ab. Albestens Cockayne. Ent. ec. 1954. 55. b. 65.
Head, thorax, lege, and foretings whitish-brown, the abdonea even also and the librarying almost white. It is an albino.

ab. suffusa Prout. Ent. toc. 1897. S.p. 217. (transferred from substatus ub. suffus litt) = fusca Lenz. Osthelder Schnett. Sulbayern. 1927. I. o. 307.

Porceings obscure doep fuscous.

Lenz fusca was described as dark grey.

Tutt originally described ab. suffusa under O. superctes from a specifical from digo. This was subsequently found to be a blanta form by Prout who transforms.

ab.pseudambigua lerny. Eos. I = 7.3.n.3%. The hindwings palor with hardly dested margins; also the erecings was numer gray.

the name to this shocies.



Januarina Joha.

spoisum Schiff. New Yorz. I775.p.77. = plantaginis Mubnor, Seval. Eur. Schautt. If 0,-15. 1.12, f. 77.

aberrational forms etc.

ambigue Bohiff. --- typical form -- the formaings ground ochour gray.

ab. obscurior Prout. Ent. toc. IS95. 1.p. 226. Tuch darker than the type. The description is very poor, Prout says he took the name from a note of flavouin The Ricker, 5.p. 72., in which it was used apparently entirely as an adjective.

ab. brunnescens Lempie. Mijdschr. Ent. 1952. 95. p. 279.
The ground colour of the fore sings brown-groy.
This must be very close to Prout's obscurior and hardly corbin of separation.

sb. ochracea Prout. Unt. dec. 1895. 6.p. 228. Strongly tinged with yellow.

ab.confluens Vorbrodt. Mitt. Schweiz Ent. Gas. IyAI. I).p. 189. The stigmata are flused together to form a longitudinal irregular bar.



clavipalpis deep. Int. Jama, I/5, 3.413. = qualripunctate Pabr. 373t. Int. 1775.

= cubicularis Schiff. ion Vors, I/75. ...72. = grisoa tott. faturf, I//6...9.n.Ije.

= segetum Esper. (a.c. Linn.) Aur. Semest. I/Fb. . (2. I/

aberrational forms stc.

clavinalnis Scon. typical form --- the fore ings brownis -arg with well all all clouding.

ab. phseura Proces. But. ee. If j. f. n. 124.

= menotriusii Putt. (nuc. Erstschn.) Brit. Det. 1891. 1.p. 153.

= thunbergi Tordstrom. Int. Hilshr. 1939.54.p. 225.pl. II. figs. 27-19.

Almost unicolorous groyish fuscous.

Prout is removing the form given by Auth as mountriosii Wretsom, This To I not belong to clavipalpis, as futt concluded, but to another species, grissa dversm.

ab. albina Putt. (Prout.) Int. Dc. IASS. S. p. 2.4. (150 Brit. Det. ISL. I. D. ISS.) The forewings yellow-grey.

Tutt gives a var. albina Eversmann as a form of clavingly is but albing Ev. is a different species. Prout redescribes it as an ab. of clavipalpis giving lubt the credit as author.

ab. pallida Lamito. fijischr. Ent. 1944. 25. p. 19. Ground colour of the forewings pale groy. Lempke is renaming the various pale forms given by fust as belonging to clavipalpis but which are actually different species.

ab. nigrofasciata Hoffmann & Moss. Mitt. Tat. Jer. Stoiern. I, 15. 52. p. 116. The marginal area of the foreving lark brown, from the closted line to the light fringe it is black-brown, the fine bor or line highs brown and the larghand lots leen black.

Tally authors make this a synonym of gustrinu etata labr, tradult the list a synonym of the type form, but it rould appear much mere a street,

up, milgromaculata Closs. Inc. int. 1.1 [1]. 13.7.50. The remiform stigns filled tith black.

ab. bilingata Prout. Ent. Do. In 95. 1. . 22 . The for wings shoring only the very listinct their and outer above the other transverse markings appearing,

th. Posoleta Lampie. Tijdschr. Ent. 1942. 9. n. 3. The trunsverse lines on the forestings corpletely fail,



Toct.23I.

Celaena Stephons.

hawarthii Curtis. Brit. Ent. It2; 6. 1.250.

aborrational forms etc.

naworthii Curtis. typical form --- yello ish-brown, variegas ' ith respect the remiform cream with a dark line on the inside.

ao, tripuncta Curtis. Brit. Ent. 1829. 6, pl. 260b. (descript. Murch, to Jetw. -. 182.) Both the stignate distinct and pale, as well as a pale patch on the subscribed striga near the costs.

striga near the costa.

Hummhrey & "estwood figure this form in vol.I.pl. 58 f. I.J. for oale patch, together with the remissorm and orbicular which stand out very clearly on the dark ground, give the "tripuncta" effect.

ab.lancea Stephens. Ill. Haust. I829.3.p. IC. (Wood Ind. Ent. IC39.pl. I) f. 284.) Differs from other forms chiefly in its smaller sine, nearly uniformly coloured forewings and paler hindwings, the formwings are pale reddish-fuscous. The coloured figure in Wood's Ind. Ent. shows the forewings pale reddish-brown with the subterminal flascia paler, and of the same otherous tint of the stignate, the dark variogation is absent; a striking aberration. From Remsegment, orfolk.

ab.hibernica Stephens. Ill. Haust. IS29. J. p. 17. (ood's Ind. Int. II) f. 285) Forewings reddish-brown, without any of the black markings that form such strong characters in ordinary form; the orbicular is usually absent and there is a whitish fascia in the submarginal area, the remiform dirty ochraceous, with a dusky centre.

The name was given because the specimens came from Ireland (Dublin) but it is not likely that all Irish specimens are of this form. We have no Irish that rish at the time of writing. The figure given by food is very similar to that of ab.lancea Stephens, also given by food, but reddish-brown instead of pale red dishbrown.

ab. erupts Germar. Faun. Ins. Eur. 1842.22. pl. 15 fligs. a 1 b. Forewings brown-black to black, the stignata white, standing out in contrast.

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aborrational doma etc.

loucostigma Hbn. typical form -- the Sigure shows the wing the brole toll faint transverse lines, the remiform yellowish.

ab. fibrosa Hubner. Barral. Hur. Schnett. ISO5-08.pl. 92 ff. 985.
The variegated form. Forevings red-brown with a paler transverse fascia before the subterminal line, the terminal area being contrastingly lark grey; the stignata outlined in paler colour from whitish-brown to yellowish.
The coloured ffigure in Hubner's work is obviously too highly coloured, being bright scarlet in places. The following lunina Havorth is probably a synonym.

ab. Lunina Haworth. Lep. Brit, T809. n. 209. = intermedia-albo Tutt. Enton. I890. 23. p. I3.

albo-lunina Tutt. Brit. Noct. IS9I. I.p. 67-68.
The ground colour of the forewings rusty-chasnut dan a large angles, and here, bend-like area in the middle, in which there is a white lunule.

Haworth's lunina is, in my opinion, a synonym of fibrosa Hbn., being of the variogated form, but Mubner's figure is so exagerated in colouring that it is not possible to be certain. Tutt sates that his "intermedia" forms are the same as lunina and remand them albo-lunina and flavo-lunina.

ab, intermedia-flavo Tutt. Entom. I890.25.p. I3. = flavo-lunina Tutt. Brit. Foct. I891. I.m. 58. The same as lunina Havorth but with the remiform schreeus incheal of white.

ab. albipuncta Tutt, intom. I890.23.p. I3. Unicolorous purplish-brown, unber-brown or blackish, with flaint traces of transverse markings, but with the remiform faite instead of otherous. The type form figured by Hubner has the remiform yellowish.

ab. nigrobrunneata Du Bois-Maymond. Its. Viss. Ins. Biol. 1951. 26.p. 39. Forewings completely black-brown, with yellow stignata.

ab. traegeri Du Bois-Reymond. Its. fiss. Ins. Biol. 1991.26.p. 39.

Morewings completely markingless pale gray, thorax and head similar colour, the reniform white. The normal darker terminal shade is only apparent in certain lights.

ab. pallida Hoydemann. Ent. Z. 1938. 52. p. 47 pl. I.f. IE.
Striking pale reddish-brown forewings, the dull grow marginal shade wholly suffused so that only the yellowish-white remiform romains distinct. Hindwings dirty white, rather paler than typical.

ab. purpurascens Lempke. Tijdschr. Ent. Ty42.85.p. 105.

Forewings purplish, the central area dark purplish, with chalky—white circumscription of the reniform stigma.

A very dark form of the variegated type.

subsp.scotica Cockayne. Ent. Rec. 1944. 56.p. 55.
Smaller and darker than the typical form which occurs in Hagland and on the Continent. The length of the forewing is 15 mm. compared with 17 mm., the average length of English specimens. The Scottish subspecies, described from Rannoch, Perthshire.



Moct. 233. p. I.

Hydraecia Guenec.

oculea Linn. daun. Succ. I761. p. 321.

= brunnea Hurn. Berl. Mag. I765. 3. no. 59.

= nictitans Linn. Syst. lat. I767. M. KII. p. 847.

= manthographa Schiff. dien Verg. I775. p. 86.

= pupilla Tabr. Ent. Syst. I794. 3(2)p. 69.

= nyopa Fabr Ent. Syst. I794. 3. (2). p. II6.

= cinerago Tabr. Ent. Syst. Suppl. I798. p. 445.

aberrational forms etc.

oculea Linn. typical form -- forewings ferruginous with grey clouding, the reniform lunate, yellow, margined with ferruginous, and completely surrounded with white.

ab. auricula Donovan. Brit. Ins. 1807. 12. p. 5 pl. 397 fl. 3.

Morevings sub-ferruginous and in the middle a large ear-shaped yellow spot enclosing a lumar-shaped ring.

There is apparently no white surround to the yellow lumar-shaped remiform, as in the typical form, the whole spot appearing yellow.

ab.erythrostigma Haworth. Lep. Brit. 1809. p. 240.
The stigmata reddish, the ground colour reddish with gray markings.
Vory similar to the preceding but the main spot of the forowing reddish.

ab.pallida Tutt. Entom. I888.2I.p. 3IO.pl. I f.8.
Porewings pale yellowish or greyish-red, all the lines and markings very distinct
Both stignata generally yellowish but sometimes the remiform is whitish, sometimes yellowish. Hindwings paler than in the type.
In Brit. Woct. I.p. 60 Tutt says the the remiform is white in pallida.

ab.pallida-flavo Tutt. Brit. Boct. 1891. 1.p. 60. Forewings pale yellowish or pale greyish-red, the remiform yellow.

ab.pallida-rufo Tutt. Brit. Woot. 1891. I.p. 60.
Forewings pale yellowish or pale greyish-red, the remiform red or reddish-orange.

ab.rosea Tutt. EntomI888.2I.p.309.pl.I.f.9.
A pale red form with transverse lines very indistinct, the orange orbicular faint, the remiform large and white. Hinkvings with wringes rose, with a distinct red line bordering them, the red shade extending some distance within the outer margin.

ab.rose@flavo Tust. Brit. Foct, Iff. I.p. 1. Bright clear red with transvoces lines very in detinet, to paid the eller, thinte as in resea futt. Tutt first lescribed resea in the Antomologist (above) as Feel red, in Drit. Foct, it is "bright, clear red".

ab.rosea-rufo Tutt. Brit. Bet. 1891. I.p. 69.
Bright clear redeith the transverse lines vers indistinct, by a mid an reder orange-red



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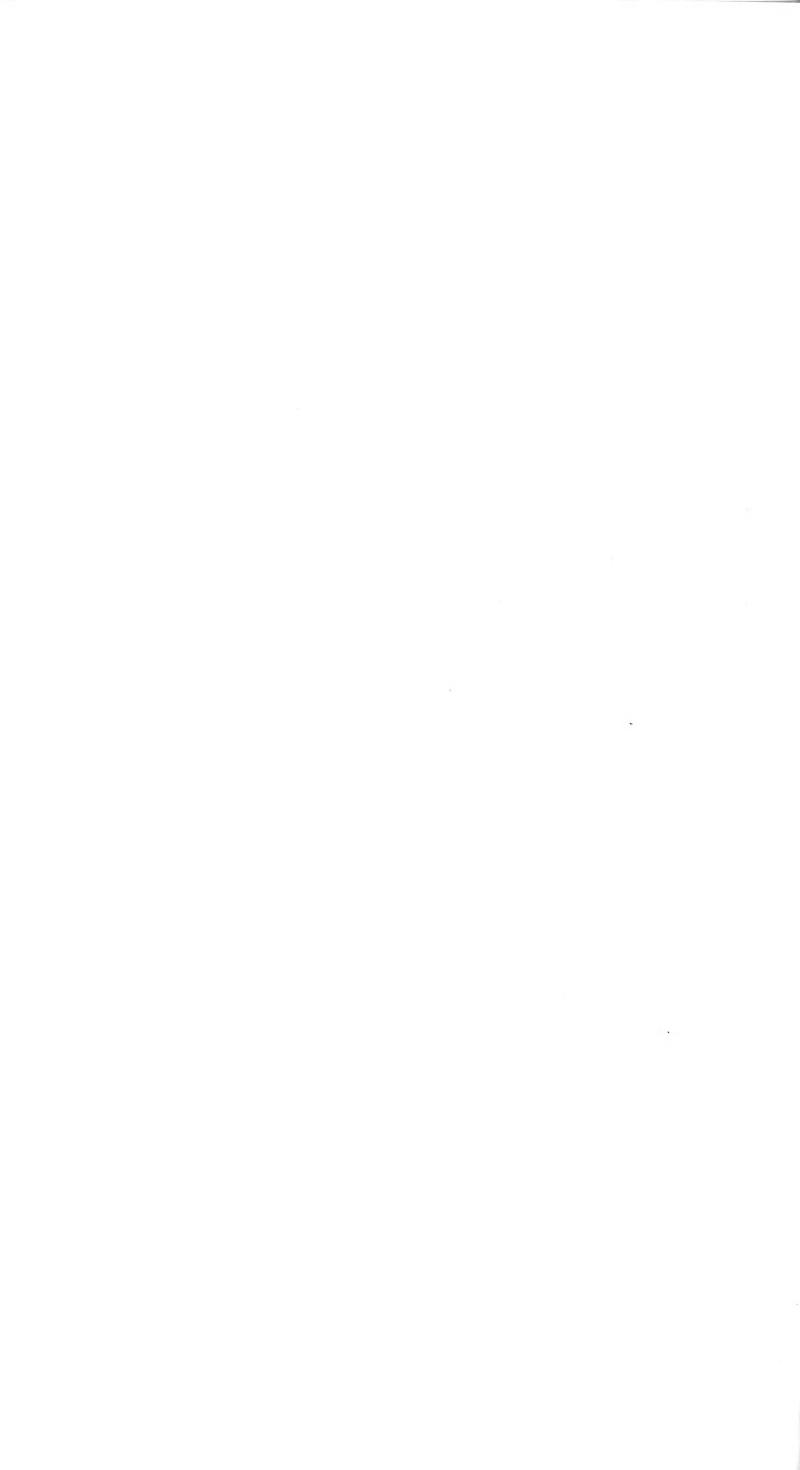
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moct. 234.

Eydraecia Guen.

finessa subsp.paludis fittb. Gabra. ICSC.21; 18. 1.1.1.1.

- paludio-albo Jutt. Enton. Ic C.21..512.-1.1.6.1.

aborrational forms atc.

pulse litt -- typical form -- ground colour order observous-yellor with white remiform and yellor orbicular. The subspicif fueces Trayor, from Taghan, Irolan, it

ab, paludis-flavo Tutt. Intom. ISSA. 21.: 31... pl. 1.: f. A. Like the proceding but with the remount yellow instead of white.

ab.intermedia Tutt. Entom. 1888.21..312.51.1.5.5. = intermedia-albo Tutt. Entom. 1888.21..312.51.1.5.5.
The ground colour darker ochroous that in redudis, with a shight grounds that and a more distinct shale around the remiform which is white.

ab. intermedia-flavo futt. Entom. In 82.21, 9.12. Like the preceding intermedia-albo futt but with the remiform gullos insto all of white.

ab.grisea Tutt. Entom. 1888.21..31..91.1.f...

= grisea-albo futt. Entom. 1888.21..31..91.1.f..4.

The ground colour grayish, lastor than paludis and intermedia, with a slight greenish timt, a pale yellow orbicular and white remissorm, a danter shade enveloping the lower part of the remissorm. His brings laster than in either puludis or intermedia.

ab.grisea-flavo lutt. Untom. 1888.21. 312. 11. 1. figs. 5 : 5 (not 6 : 7 as stated.) Like the preceding grisea-albo but with yellow remiform instead of white. Tutt gives figures 6 à 7 for this form but actually they are figs. 5 : 6, fig. 7 is a nictitans form, as lutt himself says in explanation of the plate.

ab brunned futt. Brit. Met. 1891.1.p. 54.

= brunned-albo futt. Brit. Met. 1891.1.p. 54.

Ground colour of the forewings deep brownish; the dar't shade, which in intermedia surrounds the remiform, spreading all over the wings, making them almost unicolor—ous; the remiform is white.

ab. brunnea-flavo Tutt. Brit. Wet. 1891. 1.p. 54. Like the proceding brunnea-albo but the remissions yellow instead or white.

ab.rufa acton. Ent. Noc. 1895.7.p. 79.

= rufa-albo acton. Ent. Rec. 1895.7.p. 79.

Df a dull reddish tint, inclining to brown or ochropus, with white rendform.

Acton credits futt with the authorship but sice he says futt did not 'mor of, or describe, the red form in paludis, he is not the author.

ab.rufa-flavo Acton. Ent. Rec. 1895. 7.p. 79.
Like the proceding rufa Acton but with the remisform rellow instead of white.
Acton also credits Tutt with the authorship, as in the proceding.

ab. obscura Heydemann. Ent. 1.1931.45.p.20.pl.4 f. f. f. f. The ground colour deep chocolate-brown, without red tint, relamistic, with quite narrow streak-like remiform, which is white, the form with the remiform yellow was not known to Heydemann.



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ab.obs.limba dichardson. This, se.1952, M. H. 2/2. [1.11.d.d.].
The orbitedlar absent of the modiform made. In a strictal to the continuous times the strictal to the continuous times.



lucons Preyer. (cu Beitr. 1845. j. n. 143. 01, 468 f. 5.

aberrational forms stc.

lucens Freyer. typical form --- light red-brown grame colour, the stignatorange-red.

ab.lucens-flavo Tutt. Brit. Joet. 1891. 1.p. 63.
As the typical form but with the remissorm yellow instead of crange-red or duepred.

ab.lucens-albo lutt. Brit. West 1891.1.p. 3.

ab. pallida Tutt. Brit. Toct. 1891.1.p. 52. =pallida-albo Tutt. Bt. Toct. 1891.1.p. 52. Of a pale grayion coloration with a faint suspicion of reddish in the ground colour, the remiform white.

ab.pallida-flavo futt. Brit. Woot, 1891. 1.p. 62. Like the preceding pallida futt but with the remiform yellow instead of white.

ab.grisea Tutt. Brit. loct.1891.1.p. 62.

= grisea-albo Tutt. Brit. loct.1891.1.p. 62.

Of a greyish-ochreous coloration, strongly irrorate at the base, slightly roddish in the central area, the remiform with an inner line, therefore broad as in nictitans (oculea), otherwise more like paludis ab.grisea Tutt; the remiform whits.

ab.grisea-flavo Tutt. Brit. foct. 1891. 1.p. 64. Like the preceding grisea Tutt but with the remiform yellow instead of white.

ab.rufa futt, Brit. Woct. 1891. 1.p. 51.

= rufa-albo futt. Brit. Woct. 1891. 1.p. 52.

Of a clear bright red colour, reticulated as in grisea futt, the remiform white.

ab.rufa-flavo futt. Brit. Wet. 1891.1.p. 62. Like the preceding ab.rufa futt, but with the reminora gollow instead of white.

ab. brunnea Tutt. (Acton). Fint. (ec. 1895.7. p. 79.

= brunnea-albo lutt. Ent. ec. 1895.7. n. 79. = intermedia-albo Haylemann (nec. Tutt) Ent. 1.1931, 45.p. 36.

of a brown hue, with a distinct othreous tint, sometimes redeash centrally, with white remiform.

Teydemann gives intermedia-albo with Rutt as the author which is not correct, the name must therefore be Heydemann's, but it is a synonym of Rutt's brunnes.

ab. brunnea-flavo Tutt. (Acton). Ent. Rec. 1895. 7.p. 79.

= intermedia Hoydemann. (nec. futt.) Ent. 1.1931. 45.p. 36.pl. 4 f. 23 - 24.

Like the preceding ab. brunnea Tutt but with the remiform yellow instead of white Heydemann credits futt with the authorship of intermedia which is incorrect, Heydemann is therefore the author, but the name is a synonym of brunnow-flavo dut



Woot, 235 p. 2.

ab.brunnea-rufo Tutt. (Acton). Ent. Rec. 1895.7.p. 79. Like brunnea Tutt but with the remiform red instead of white.

ab.castanea Lempke. Tijdschr.Ent.1942.85.p.115.

= brunnea Heydemann.(nom.preoc.Tutt.) Ent.4.1931.45.n.36.

The ground colour of the forewings doep brown, the remidern yellow.

The "brunnea" nom.coll. given by Heydemann is not the same as brunnea Tutt, Lemphe has therefore renamed it castanea.

ab.brunnes-albo Heydemann. (nom.preoc. Tutt.) Ent. 1.1931.45.p.36 pl.4 f.17. Brown to dark leather-brown, without the red tone in the middle field, the reniform white. Hindwings mostly wholly dark gray. Hoydemann's brunnes and brunnes-albo are not the same as Tutt's forms of these names.

ab. obscura Haydemann. (nsc. Tutt.) Ent. 1.1931. 15.p.36.
Malanistic. Deep raddish-bluck-violat-brown with bluckish lines, the radiform bright red-orange. Hindwings almost completely black-gray.
Haydemann seems completely mixed over Futt's forms. In this case he again craff futt with the authorship but futt's obscura was for distitung (contos), the name obscura must therefore be Haydemann's.



crimenensis Surrous. Plane. Sat. 0.1,10.22. . 1. = crimenensis Surrous. (aom. aud.) Mat. 00.1) 8.40. . 10.

charretional dans ste.

crimanoncis Surrovo : Picree. typical form --- bright Trio :-rel, the control area, remiform and orbicular orange.
This species occurs in Arth Wellah, Boothank and conventy in Iroland. It can only be separated with certainty by its genitalia.

ah, mallila-flavo Buerows, Ent. 33.1917.22.5,81. Palo yollowish-gray, wish the maniform yellow.

sb.rufoscons-flavo Burrows. Ent. tec. 1910. 41. p. 81. Dull red, with the remiform bull orange.

ab, rufoscens-albo Burrous, Ent, De. 1910. 41.p. 91. Dull red, with the rediffern white.

ab, grisescons-flavo Burrows, Unt. De. 1,1 .44. . 1. Aray-rol, with the remiform yells.

un. primare ter Abo Bummara, Ant. w.l., kn.2 .p. 1. drey-mal, with the modulitary dube.

ub, eus bures-Alux - Summero. Ent. 10.4 11.42. . 1. 1. Dum't chestaut-brom, with the number differentable.

wh.castanea-will humbous. Ent. 10,1913,2 .-. Ol.



Hydraocia Guen.

Noct. _37.

hucherardi Mabille. Bull. Soc. Ant. France. 1907.p. 37. = murciogoi Fernandez. Boll. Soc. Espan. Hist. Mat. 1933. 35.p. 362.

aberrational forms etc.

hucherardi Mabille typical form -- the ground colour whitish-ochreous to greyish-ochreous.

ab. subrufa Lucas. Bull. Soc. Ent. France. 1930.p. 195. Forewings somewhat reddish, the hindwings rosy-ochraceous.

ab.fuscoquadrata Goodson. Ent. Gaz. 1955. 6.p. 68 pl. 2. Forewing with the reniform itself, and the space between its outer edge and the postmedian line, heavily dusted with fuscous, forming a decided, dark scaled square. The postmedian line curves well inwards towards the reniform instead of proceeding in a straight line from the inner margin to the costa, the only place where, in normal specimens, it is bowed.



Moct. 238. p.1.

Gortyna Hbn.

micacea Esper. Eur. Schmett. 1789. 4. (2).p. 466.pl. 145.f.6. = cypriaca Hubner. Samml. Eur. Schmett. 1800-03.pl. 46 f. 224.

aberrational forms etc.

micacca Esper typical form --- the forewings light rust colour or reddish-brown.

ab.cypriaca Haworth (nec. Hubn.) Lep. Brit. 1809.p. 227. (nom. preoc. Hbn.) Forewings rosy or rosy-fuscous. This is probably a synonym of the type form, as is cypriaca Hubner, but most authors separate it, on the strength of Haworth's "rosy", as a being pinkish.

ab.grisea Tutt. Entom. 1888.21.p. 306 & 307. Forewings whitish-grey, with a slight pink tinge.

ab.lutea Tutt. Entom.1888.21.p.306. Forewings yellowish-red, the transverse lines paler than in the type. Hindwings pale yellowish with faint traces of the lunule and transverse line, but not of the transverse shade noticeable in the darker forms.

ab.rubida Tutt. Entom. 1888.21.p. 306 & 307. Forewings deep red, tinged with purplish.

ab.brunnea Tutt. Entom. 1888. 21.p. 306 & 307. Forewings of a deep shiny brown, Hindwings very much suffused with fuscous. This form has a superficial resemblance to G. petasitis Dbl.

ab.plumbosa Harrison. Vasculum.1929.15.p.39. "In colour the specimen was dull leaden". Harrison does not mention the hindwings.

ab.intacta Warren. Seitz.1911.3.p.226.pl.46 row e. The hindwings are pure yellowish-ochreous, without marking of any kind. The forewings are wholly suffused with rosy-brown, the median area only a little deeper in colour. Underside rufous-yellow, deeper rufous along costa and termen of both wings, without trace of cell spot and outer line. This description is exaggerated, the line and cell spot can be clearly seen in the Type which is in the Rothschild Coll. and the yellow-ochreous of the hindis largely produced by grease.

ab.diluta Cockayne. Ent. Rec. 1951.63.p. 160. Ground colour of the forewing whitish, with a faint tinge of yellowish-pink, the markings pale with a slight rosy tint; the narrow postmedian and marginal lines are rather darker. Hindwing and abdomen are pale cream, hindwing markings very faint, thorax pale rosy-brown. This is an albinistic or dilute form.

ab.aurantia Richardson. Ent. Rec. 1952. 64. p. 272. pl. 11. f. 20. Forewings bright orange-red, markings normal.



ab.discolor Krulikowsky. Bull. Soc. Nat. Moscow (1893) 1894.p. 70. Forowings greyish or greyish-fuscous, often greenish, not compary.

ab.confluens Lempke. Tijdschr. Ent. 1942. 85. p. 120. The orbicular and reniform joined, forming one single spot, their boundary absent at the pint of juncture.

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Toct. 209. p. 1.

Gortyna Hon.

petasitis Doubleday. Zool.1847.p.191). = vindelicia Freyer. Neu Beitr.1849.6.p.82.pl.531 f.3.2 pl.562.

aborrational forms etc.



Woct. 240. p.l.

Gortyna Hbn.

flavago Schiff. /ien Verz.1775.p.86.

= aureo-maculata Goeze. Beitr.1781.3.(3).p.238. = lappae Donovan. Brit.Ins.1801.10.p.35.pl.340.

= ochraceago Haworth. Lep. Brit. 1809.p. 234.

= flavoauratum Tutt. Entom. 1888.21.p. 271.

aberrational forms etc.

flavago Schiff. typical form -- the forewings gold-coloured, sprinkled with brown.

ab. ochracea Hubner. Beitr. 1786. 1.p. 19. pl. 2 f. M. The paler form. The figure shows the forewings palish yellow, the description says ochre-yellow.

ab. suffusa Varren. Seitz. 1911. 3. p. 225. The forewing wholly suffused with ferruginous.

ab. reducta Lempke. Tijdschr, Ent. 1942.85.p. 107. The dark band at the forewing fails, for the greater part, or completely.

Noct. 241. p. 1. Pyrrhia Hubner.

umbra Hufnagel. Berl. Mag. 1766. 3.p. 294.

= chrysographa Frnst. & Engr. Pap. Hur. 1791. 7.p. 105.pl. 288 fig.

= conspicua Borkhausen. Eur. Schmett. 1792. 4.p. 123.

= umbrago Esper. Eur. Schmett. 1796. 4. (2) Abschn. p. 21.pl. 1852. 7-8

= marginago Haworth. Lep. Brit. 1809. p. 235.

abstrational forms etc.

umbra Hufn. typical form -- orange-yellow or orange-red.

ab.marginata Fabricius. Mantissa Ins. 1787. 2.p. 166.
The ground colour yellow, without the orange tint, the bands ferruginous.

ab. suffusa Lempke. Tijdschr. Ent. 1941. 84. p. 342. Ground colour of the forewings suffused with red-brown and therefore darker; the marginal band of the hindwings is also blacker.

ab. rutilago auct.

Many authors include rutilago Fabricius under this species but Fabricius refers to the Wien Verz -rutilago. This is placed as a synonym of Tiliacea aurago Schiff. in these notes. Haworth makes the rutilago Fabricius a synonym of marginata Fabr. but refers to the rutilago of Hubner fig. 185 which is not the rutilago of Fabr. and is now considered a synonym of another species - purpurina Esper. The name rutilago, to avoid confusion, should be restricted to T. aurago; fabricius mentions a fuscous basal band which this species, umbra, does not possess.

Noct. 242. p.l.

Heliothis Ochs.

viriplaca Hufnagel. Berl. Mag. 1766.3.p. 406. = dipsacea Linn. Syst. Nat. 1767. Ed. 12.p. 856.

aberrational forms etc.

ab.tristis Stauder. Ent. Anz. 1923. 3.p. 44. More monotonous in colour than the typical form, darker, the usual pale parts of the forewing greenish-grey, not yellow-grey, and hardly standing out from the ground colour. Hindwings with the black much increased.

ab. albida Fuchs. Jahrb. Massau Ver. Mat. 1904. 57. p. 38.
Forewing whitish with very weak middle band, the hindwing with pure white band and large spot.

ab. canarionsis Warren. Scitz 1911.3.p.245.
Described as an aberration but is a subspecies from the Canary Islands and not included here.

Noct. 243.

Heliothis Ochs.

maritima de Graslin.

Bull. Soc. Lin.

subsp. warneckei Boursin. (nom. nov. pro septentrionalis/Lyon.196433.240)

= septentrionalis Hoffmeyer. (nom. preoc.) Flora og Fauna 195.44.5

maritima

subsp.warneckei Boursin. British specimens belong to this subspecies which shows a blackish streak or shade at the base of the forewing just below the median vein, a feature not possessed by other forms of maritima or by dipsacea.

aberrational forms etc.

ab.ferruginea Spuler. Schmett. Eur. 1907. 1.p. 281.
Sometimes in the male the forewings are yellow-red, in the female reddish brown-yellow, suffused, as is also the body. Hindwings red-yellow tinted.

ab.albida Cockayne. Ent. Rec. 1951. 63.p. 160. The ground colour of the forewing white; the central dot of the orbicular and the dark central marks of the reniform are present and distinct; all the other dark markings, especially the median shade, are very pale, but the subapical mark and the dots of the subterminal line are darker; the marginal row of dots is black; the marginal area between the subterminal line and the termen is white. Hindwing normal, the thorax pale.

ab. obscura Lempke. Tijdschr. Ent. 1941. 84. p. 337. The forewings dark olive-grey, the markings obsolete.

.

Noct.244.

Heliothis Ochs.

peltigera Schiff. Wien Verz. 1775.p.89. = alphea Cramer. Pap. Exot. 1779.3.p. 99.pl.250 f.F.

aberrational forms etc.

peltigera Schiff. typical form -- Schiff says pale cinnamon coloured. Cramer's alphea was yellow-brownish and not worth separating.

ab. charmione Stoll. Pap. Exot. Suppl.pt. 5. 1791.p. 162.pl. 36 f. 10. = straminea Donovan. Brit. Ins. 1793. 2.p. 65.pl. 61. The ground colour yellow. Donovan's straminea was pale yellow or bright clay.

ab.florentina Esper. Eur. Schmett.1788.4.(2).p. 422.pl.135 f.2. The ground colour pale ochre-yellow. Hardly different from the preceding but can be used for specimens intermediate between the yellow form and typical yellow-brownform.

ab. barbara Fabricius. Ent. Syst. 1794. 3. (2). p. 111.
According to the original description the forevings are ashy, with obsolescent submarginal band.

ab.pallida Cockerell. Entom. 1889. 22.p. 4. (description vol.11.p. 24.) The description merely says "Very light." Presumably very pale yellow.

ab.condolens Schawerda. Verh.zool.-bot.Ges.Wien.1914.64.p.365.
Dark appearance; the reniform dark brown, the normally shadowy transverse band is red-brown or black-brown. The middle field brown, or reddish, toned. Hindwing with the marginal band deeper black and broader, the light spot absent.

ab. clarissima Turati. Atti. Soc. It. Sci. Mat. 1924.63.p. 101.pl. 4.f.6. The forewings very pale sulphur-yellow with only the reniform stigma and apical patch apparent, the subterminal transverse band only indistinctly indicated, other markings extinct. Hindwings pale, the marginal band grey, the discoidal lunule showing conspicuously.

ab.aurantiaca Strand. Arch. Naturg. 1915. 81. A. 12. p. 143. The hindwings orange-yellow.

ab.omicronata Richardson, Entom. 1958. 91. p. 211; pl. 4, f. 10.
On the forewings the usual dark costal patches are circular in shape and separated from the costa, standing out strongly against the pale central area. This is separated from the subterminal by a strongly pronounced darker band.

armigera Hubner. Samml. Eur. Schmett.

aborrational forms etc.

armigera Hbn. typical form --- Hubner's figure shows the forewings pale greyish-ochreous with the subterminal band bluish-grey.

ab.fusca Cockerell. Entom. 1889.22.p.4. (description vol.11.p.24.) The description merely says "a dark brown variety."

ab. ochracea Cockerell. Entom. 1889. 2., p. 4, (Ref. to pl. 3 f. 7.4th. ep. U. 3. int. Com.) Presumably ochraceous.
No description is given by Cockerell and I have not seen the plate referred to.

ab.rufa Warren. Seitz.1911.3.p.246.pl.50.row L. Uniformly dull flesh-colour, with the lines and stigmata hardly visible.

Moct.246.

Dicycla Guenee.

oo Linn. Syst. Wat. 1758. Ed. 10. p. 507.

= ferruginago Mubner. Samml. Sur. Schmett. 1800-03.pl. 41.f. 195.

aberrational forms etc.

oo Linn. typical form -- pale yellow with greyish of marking. This is the Linnaean description and far from satisfactory. Hubber figured an insect under the name ferruginage which is probably the same but the markings are ferruginous as are practically all oo forms. Tutt separated this ferruginage Hbn. as an aberration with the space between the elbowed and subterminal lines showing a dark transverse shade. There is nothing of this sort in our copy of Hubber and, in my opinion, aberrations should not be based on the coloured figures of such early works which were meant to give a general idea of the species, the ground colour and markings often being much exaggerated.

ab.renata Fabricius. Ent. Syst. 1794.3(2).p.85.

lings fuscescent; 00 and hinder stripe ashy. The same size as 00 but the fore-infuscous, the ordinary snots in the middle, the 00 mark and the hinder stripe ashy.

This form is omitted by most authors but suggested by others as the ab.renugo of Haworth. If it is an 00 form it is not Haworth's, which had the markings ferruginous. The description does not seem to fit any 00 form and is best not used.

ab, renago Haworth. Len. Brit. 1809. p. 438.

Similar to the ferruginage of Hubner (typical form) but with the wings more extensively saturated; the costa is partly yellow, the rost varied fuscous and ferruginous.

This is the more heavily marked form , with the space between the middle shadow-line and the subterminal, more or less filled with forruginous, the base also shows a reddish-grey blotch.

ab.griseago Schultz. Soc. Ent. 1906. 21.p.3.

Similar to ab. renago Haworth but the colour of the greater part of the forewing is grew, or dark grey, instead of brown-red or blackish-brown, on which the wellow stigmata stand our clearly. Fransitional specimens have middle area with no dark shading, as similar specimens of ab. renago.

ab. olivacea Skala.

From the description given by Draudt in Seitz.1935.3. Suppl.p.190. with no reference.

Completely suffused with olive-gray.

ab.rufocanago Dannehl. Ent. 7.1926.39.p.184.

The rust-coloured darkening in the outer area (as seen in ab. renago Haw.) is

here suffused with olive-grey.

So similar to Haworth's renago as to be unworthy of a name, Haworth did not state that the outer area was ferruginous, but that the wings were fuscus and ferruginous varied; most of our English specimens show some amount of grey in the red-brown of the outer area.

Moct., 246. p. 2.

ab. rufescens lutt. Brit. Noct. 1892. 3. p. 18.

Reddish-yellow, without the dark subterminal shade. The ground colour not whitishyellow as in the type but of a warmer tone of yellow, tending to orange or red, markings as in the type with only the basal shade developed and with no subterminal shade.

Tutt cites Hubner's fig. 867 as being of this form which is an obvious error, the figure shows an extremely dark subterminal band united with the basal shade along the inner margin, looking like an exaggerated ab. renago, the opposite to Tutt's description.

ab. sulphurea Staudinger. Cat. Ed. 3. 1901. p. 203. Unicolorous sulphur-yellow, sometimes the fringes chequered with brown. Staudinger by "unicolorous" presumably meant there were no markings, we have such specimens from the Continent.

ab. conflua Holze. Int. Ent. 2.1921.15.p.79.

= juncta Lempke. Tijdschr. Ent. 1942.85.p.81. (description vol.82.p.197.)

The orbicular and reniform stigmata are confluent, normally there is a space between them. It is reminiscent of Cymatophora octogesima, in which also the stigmata are united into the form of an 80.

For some strange reason Lempke states that the ab.conflua, in his opinion, is doubtless of the semiconfluens type, which has the stigmata joined by a doubtle line. There is nothing to suggest this in Holze description, in which he likens his form to octogesima (ocularis), which has the stigmata merely touching each other. Lempke's juncta is therefore a synonym.

Cosmia Ochs.

pyralina Schiff. Wien Verz. 1775.p.88.

aberrational forms etc.

pyralina Schiff. --- typical form -- ground colour dark purolish-brown.

ab.corusca Esper. Eur. Schmett.1788.4.(2).pl.135 f.4-5.(1789.p.424.)
Forewings bright reddish-brown.
The plate figures have priority over the text; on the plate the name is spelt corusca, in the text, published a year later, it is "corrusca". The figures are very good and show a much lighter form than Schiffermuller describes-"dark purplish-brown".

ab. arnoi Schawerda. Mitt. Munch. Ent. Ges. 1924. 14. p. 100. The forewings bright or light rose-brown. Presumably lighter than the preceding.

ab. cuprea Hormuzaki. Ent. Wachrichten. 1894.20.7.55. The ground colour of the forewings very light coppery-red, not the usual dark cherry-brown. The black apical spot, usually very sharply marked, is either dark brown, obsolescent, or completely absent, and there is no trace of a whitish mixture near the costa or down the transverse line; the central area is not darker than the rest of the wing. Hindwings somewhat paler than normal.

ab. saturatebrunnea Strand. Arch. Naturg. 1915. 81. A 11. p. 164. Head, thorax, and forewings browner. A very vague description, of little use.

ab. obscura Hoffmann & Kloss. Schmett. Steierm. 1915. 3. p. 141. The ground colour black-brown, without the white transverse stripes.

ab.fuliginosa du-Bois-Reymond. Its. Viss. Ins. 1931. 26. p. 39.
The ground colour is completely devoid of the shining copper-red or brown tones; it is, on the contrary, unicolorous sooty-grey. The marking is present.

Noct.248. p.1.

Cosmia Ochs.

affinis Linn. Syst. Nat. 1767. Ed. 12.p. 848.

= diffinis Hubner. Beitr. 1786-89.1.p. 24.pl. 4 f. T.

aberrational forms etc.

affinis Linn. typical form --- the ground colour ferruginous, with white spots on the costa.

ab. ochrea Tutt. Brit. Noct. 1892. 3.p. 21 & 22. Pale ochreous-brown or ochreous-brown with white costal spots or streaks.

ab. obsoleta-ochrea Tutt. Brit. Noct. 1892. 3. p. 22.
Pale ochreous-brown, the white costal marks merged into the ground colour.

ab. suffusa Tutt. Brit. Noct. 1892. 3. p. 21 & 22.

= affineola Strand. Arch. Naturg. 1915. 81. A 11. p. 164.

The forewings dark grey, instead of the reddish or reddish-brown of the typical form. The white costal streaks are presumably present since the form without that

ab. obsoleta-suffusa Tutt. Brit. Noct. 1892. 3.p. 22. Dark grey, as the preceding, but with the white costal marks absent.

is separated by Tutt as obsoleta-suffusa, the following form.

ab.nigrimaculata Warren. Seitz.1911.3.p.230 pl.47 row d. = subaffineola Strand. Arch. Maturg.1915.81.A ll.p.164.
The forewing marked by patches of black scales in the basal area, along the cell and vein l, before and below the orbicular, beyond the remiform in the angle of the outer line, and more slightly before the termen.

ab. affinella Strand. Arch. Naturg. 1915. 81. A 11.p. 164. (See Lempke, Tijd. Ent. 85.p. 86) Forewings in the costal field, on the outer side of the postmedian line, whitish suffused.

Lempke in Tijdschr. Ent. 85.p. 86 restricts the name to the fine form in which the white costal marks are clearly enlarged (almost as in C. diffinis), independent of ground colour.

ab.morleyi Porritt. Ent. Mon. Mag. 1923. 59. p. 88.

= nigrata Schawerda. Verh. zool. -bot. Ges. Wien. 1927. 77.p. (82).

Head, thorax body and forewings dark chocolate-brown to almost black; the white costal marks sometimes present but often, perhaps in most cases, partially or entirely wanting. Hindwings with the basal portion the colour of the forewings but the outer margin broad and black.

Schawerda's nigrata had the forewings as deep black as the hindwings, the markings still to be seen, especially on the costa, grey.

ab. bredemanni /arnecke. Ent. Anz. 1933. 13. p. 95. Hindwings with the basal half of the same black as the marginal half; normally the basal area is distinctly palor. The forewings are normal. Possibly a northern subspecies but the author does not say if the typical form is found. Described from the Friesian Islands.

ab. obsoleta Lempke. Tijdschr. Ent. 1942. 85. p. 86. Forewings reddish, the white costal marks absent.

Moct. 249. p.l.

Cosmia Ochs.

diffinis Linn. 3yst. Nat. 1757. Ed. 12. p. 848. = affinis Hubner. Beitr. 1787. 1. p. 10. pl. 1. E.

aberrational forms etc.

diffinis Linn. typical form ---- forewings ferruginous with costal white snots, and 2 black motson the outer margin (apex).

ab.confinis Herrich-Schaffer. Syst. Bearb. 1845.2.p. 224.pl. 87.f. 450. In appearance, between affinis and diffinis. The colour more that of diffinis but not so pale yellowish but more violet-grey, the markings more as in affinis, the white spots on the costa however are larger than in diffinis and there is a white longitudinal streak running from the break in the subterminal line inwards towards the base. Hindwings paler than normal. The figure shows an insect very much like diffinis but paler, the colour shading from grey to pale purplish grey, the white lines and costal spots prominent. Described from Turkey.

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trapezina Linn. Syst. Wat. 1758. Ed. 10. p. 510.

aberrational forms otc.

trapezina Linn. typical form --- pale ochreous-grey, with a black spot in the middle of the "triangle", and small spots on the margins, the triangle somewhat darker than the rest of the wing.

ab.pallida Tutt. Brit. Noct. 1892. 3.p. 22 3: 23.
Whitish or ochreous-gray with the transverse lines obsolete.

ab.rufo-pallida Tutt. Brit. Noct. 1892. 3.p. 23.

= rubella Krulikowsky. Bull. Soc. Nat. Moscow. (1893) 1894.p. 80.

Whitish or ochreous-grey, the central area between the complete basal and angulated lines, forming a reddish band.

ab.ochrea Tutt. Brit. Moct. 1892. 3. p. 23.
Bright ochreous (slightly reddish), or deep yellow-ochreous, sometimes with a reddish tint. The transverse lines distinct.

ab. obsoleta-ochrea Tutt. Brit. Woct. 1892. 3.p. 23.
Bright ochreous (slightly reddish) with the transverse lines obsolete.

ab.rufa Tutt. Brit. Noct. 1892.3.p. 23. Forewings deep red, the transverse lines distinct.

ab. obsolete-rufa Tutt. Brit. Noct. 1892. 3.p. 23. Forewings deep red, the transverse lines obsolete.

ab.grisea Tutt. Brit. Noct. 1892.3.p.23. Dark grey, with darker transverse lines.

ab.carnea Warren. Seitz.1911.3.p.230.pl.47 row f. Pale foreings with all the shadings, especially the thick median shade, delicate flesh colour.

ab.conspersa Warren. Seitz.1911.3.p.231.pl.47 rowg. (Lempke-Tijd.Ent.85.p.82) Forewings either pale ochreous, yellow ochreous or reddish, very strongly dusted with dark scales. Lempke restricts the name to specimens which are reddish.

ab. nigra Tutt. Brit. Woct. 1892. 3. p. 23. Forewings entirely deep blackish-grey, with fainter transverse lines.

ab.ochrea-conspersa Lempke. Tijdschr. Ent. 1942. 85. p. 82.
Forewings yellowish, strongly powdered with black scales. By this name Lempke rost restricts conspersa Warren to the form in which the forewings are reddish with strong black dusting, which makes a different impression.

ab.aurantia Lempke. Tijdschr. Ent. 1942. 85.p. 82.
The ground colour of the forewings orange, the markings distinct.

ab.lutescens Wehrli. Verh. Nat. Ges. Basol. 1917. 28. p. 241. The entire hindwing glossy yellowish, without the normal grey.

ab.postnigra Cockayne. Ent. dec. 1951. 63.p. 161.pl. 5 f. 9. The normally grey or brownish part of the hindwing is intensely black. The contrast between the pale forewings and the black hindwings is remarkable.

ab.fasciata Erschoff. Trudy Ent.Ross.1862.12.p.207.

= badiofasciata Teich. Stett.Ent.Z.1883.44.p.173.

= nigro-virgata Tutt. Brit.Noct.1892.3.p.23.

The ground colour of the forewings light, the entire middle area filled with dark brown to blackish, standing out sharply.

ab. obscura Aurivillius. Nord. Fjar. 1887-88. p. 161.
Similar to the preceding but the ground colour reddish, the median area black-brown. Hardly worthy of separation from fasciata, the main character being the filled-in median area.

ab. conjuncta Cockayne. Ent. Rec. 1951. 63 p. 161. On the forewing the black dot at the lower end of the reniform is extended as a black line to the lower end of the orbicular.

Noct.251. p.1.

Enargia Hbn.

paleacea Esper. Eur. Schmett. 1788. 4(1).p. 323.pl. 122 f. 3-4. = fulvago Hbn. (nec. Linn.) Samml. Eur. Schmett. 1800-03.pl. 41 f. 196

aberrational forms etc.

paleacea Esper. typical form -- the forewings yellow or pale ochre-yellow.

ab.angulago Haworth. Lep. Brit. 1809.p. 239.
The forewings golden.
Most probably a synonym of the type but most authors make it the richer, orangeyellow form.

ab.citrina Cockayne. Ent. Rec. 1951. 63.p. 161. The forewings pale yellow or straw colour, the markings normal.

ab.teichi Krulikowsky. Bull. Soc. Nat. Moscow (1893) 1894, 81.
On the forewings the median space is reddish or fuscous.
This presumably means the area between the transverse lines is filled in, since Krulikowsky named the form in C. trapezina (ab. rubella) with the same description, this form, quite well-known, has the triangle on the forewings filled completely with reddish.

ab.fusca Schultz. Soc. Ent. 1899.14.p. 139. (see Soc. Ent. 1900.14.p. 165. form fixed) The extreme form of ab. teichi Krul. The median, and outer marginal field, of the forewing of a violet-brown colour. Hindwings darkened towards the base. In his first description of fusca Schultz gave the same description as that of teichi Krul., but mentioned a more extreme form in which the dark colour not only invaded the median area but spread to the outer margins. Later, in the same volume, he explained that he did not know of ab. teichi Krul. at the time of writing, but that it must be a transitional form to his ab.fusca. He therefore restricted his name fusca to the more extreme specimen with the brown occupying about two thirds of the wing.

ab.postulkae 3kala. Ent. 2.1929. 42.p. 317. Characterised by the lack of markings. This probably means they are very weak or absent.

Noct.252. p.1.

Calamia Hbn.

tridens Hufnagel. Berl. Mag. 1766.3. p. 300. = virens Linn. Syst. Nat. 1767. ed. 12. p. 847.

subspecies occidentalis Cockayne. Ent. Gaz. 1954. 5. p. 155.

subsp.occidentalis Cockayne. - the race from the Burren, Co. Clare, smaller and blue-green instead of the yellow-green of the typical form, which does not occur in Britain. The forewing with white reniform, the fringe never nure white but showing a coloured line, from grey to red-brown, inside it. Hindwing grey, not white

ab. immaculate Staudinger. Cat. Ed. 2.1871.p. 99. Unicolorous green, without the white reniform spot.

ab. bimaculata Krulikowsky. Bull. Soc. Nat. Moscow (1893) 1894. p. 65. Forewing with two white spots, the reniform distinct, the other, small and round, in the cell.

ab.rufata Warren. Seitz.1911.3.p.241. The normally white remiform is filled with rufous-fuscous or edged with rufous. The whole hindwing brownish-grey with the fringe white.

ab. thalassina Marren. Seitz. 1911. 3. p. 241. pl. 48 row g.
The outer half of the fringe of the forewings greenish, the hindwing green flushed with darker green.
These two specimens are in the Tring collection and, in my opinion, are certainly artefacts, they appear to habe been dipped in a green liquid, the fringes being unevenly stuck together.

ab.rubrociliata Schawerda. Mitt. Munch. Ent. Ges. 1931. 21. p. 56.

The inner half of the fringe red-brown, the white reniform red-brown surrounded. All our Irish specimens, subsp. occidentalis Cockayne, show this character, the name therefore cannot be applied to our race. Other characters mentioned by Schawerda also agree with our specimens, the hindwings for instance, are grey particularly towards the outer margin, in the typical form they are white. It is possible that our Irish specimens originated from Spain, the same form appears to occur there as an aberration.

ab.flava Wohlfahrt. Ent. Z.1925.39.p.36.
Forewings yellow with a pale brown line inside the white fringes, orbicular absent, reniform pale, outwardly edged with pale brown. Towards the base yellow-green suffused, thorax and head yellow-green, antennae yellow, abdomen and hind-wings dirty pale yellow-green.

Specimens which have been in contact with moisture can go yellow but since the antennae are also yellow the form would seem to be genuine.

ab.decolorata Caradja. Iris.1929.43.p.63.
Thorax and forewings whitish with a very slight greenish suffusion in the middle area; costa and outer margin, also the apex, with a rosy shimmer.

Woct.253. p.l.

Zenobia Oken.

retusa Linn. Faun. Suec. 1761. p. 321. = vetula Hubner. Beitr. 1788. 1(3). p. 13. pl. 2 f. H.

aberrational forms etc.

retusa Linn. typical form -- the forewings olive-greyish, with three hale strings

ab' gracilis Haworth. Lep. Brit. 1809. p. 251.
The forewings brown (fuscous) with two main stripes less, distinct than normal.
Tutt, arren and other authors, probably copying Tutt, say this form is reddishtinted, but there is nothing in the original description to suggest this. Haworth describes it as fuscous, whereas his retusa is greyish-fuscous. If gracilis is to be considered an aberration it is merely more brown than the type form.

ab.grisea Lempke. Tijdschr. nt.1942.85.p.87.
The forewings dark grey.
This would seem little more than a synonym of the type since the Linnaean description was ashy-grey, not olive-brownish as Lempke states in his Catalogue.

ab. nictitans Lempke. Tijdschr. Ent. 1942. 85. p. 87.
The circumscription of the stigmata, and the transverse lines, strikingly pale, sharply contrasting.

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subtusa Schiff. Jien Verz. 1775.p. 88.

aberrational forms etc.

subtusa Schiff. typical form --- forewings olive-grey or greyish-fuscous.

ab'.pallida lutt. Brit. Noct. 1892.3.p. 40. Forewings pale whitish-grey, with scarcely a trace of the olive tint generally present, and no suggestion of fuscous.

ab. grisea Lempke. Tijdschr. Ant. 1942. 85. p. 87. Ground colour of the forewings pure dark grey.

ab.rufescens Lempke. Tijdschr. Ent. 1942. 85.p. 86. The ground colour of the forewings reddish-gray.

ab.rufolineata Lempke. Tijdschr. Ent. 1942. 85. n. 87. The transverse lines and circumscription of the stigmata reddish-yellow.

ab. obsoleta Lempke. Fijdschr. Ent. 1942. 85.p. 87. The circumscription of the stignata completely absent or almost so.

ab. semiconfluens Lempke. Tijdschr. Ent. 1942. 85. p. 87. (description vol. 82. p. 197) The stigmata united by a double line, instead of joining.

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Moct. 255. p. 1.

Rhizedra Varron.

lutosa Hon. Samml. Eur. Schmett. 1800-03.

aberrational forms etc.

lutosa Hbn. typical form -- Hubner's figure shows a very pale form, rather strongly tinted with pink, probably an exaggeration. Wo black dusting and no row of black spots in the postmedian area.

ab.pilicornis Haworth. Trans. Ent. Soc. Lond. 1812.1.p. 336.

= bathyerga Boie. Isis 1835.28.p. 323.

= bathyerga Freyer. New Beitr. 1836.2.p. 122.pl. 170 f.l.

Forewings reddish-grey, (cinereo-rufescentibus), scarcely dusted, with six small fuscous spots forming an outer curved stripe. Hindwings white.

Boie's bathyerga was pale straw coloured, with a curved row of dark spots. The hindwings pale, the row of spots becoming extinct.

Freyer received his specimen, figured as bathyerga, from Boie, so presumably it is the same. The figure shows the forewings pale straw with a row of dark spots, the upperside of the hindwings in our copy shows a pinkish suffusion which may or not be due to the artist trying to give the sheen seen on lutosa in certain lights. Neither of these bathyerga are different enough to separate from pilicornis.

ab. crassicornis Haworth. Lep. Brit. 1809. p. 173.

Haworth says this form is very similar to the figure in Hubners Samml. Eur. Schmettel. 85 f. 396., except in size and the antennae. This figure shows heavy dark dusting at the base of the forewing stretching out ray-like along the innermargin and middle vein, to the centre of the wing. Haworth's description only mentions the wings being dusted with numerous inconspicuous fuscous atoms. There are six larger points or dots in a curved line in the outer area and the wings are greyish-red. Hindwings fuscous with yellowish fringes.

ab.vectis Curtis. Brit. Ent. 1833. 10. p. 459 fig.
Pale ochreous, the forewings alternately marked with numerous ochreous and cream lines, the nervures being pale; the central nervure suffused with reddish-ochre, also the one next the inner margin which is slightly freckled with black; a fuscous dot at the disc and a curved line of dots in the outer area, the margin bears 7 black dots. Hindwings white slightly tintel with ochre and freckled with brown below the centre where there is a pale spot shining through from beneath; the obscure line of fuscius dots is continued across the wing and there are a few black dots on the margin.

ab.cannae Stephens. (nec.Ochs.) Ill. Haust. 1829. 3. p. 73.
Misidentified as cannae Ochsenheimer by Stephens but since most authors use the name as an aberration of lutosa it is included here.
Forewings pale reddish, or yellowish-ash, with a few minute dusky atoms, with some larger spots at base and a row still more distinct towards the outer margin forming an arcuated striga; in the middle of the disc a single spot of similar hue. Hindwings reddish or yellowish-ash.
Differs from the following rufescens Tutt in having the transverse row of

well defined dots aross the forewing.

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ab.rufescens Tutt. Brit. Noct. 1891.1.n. 55 & 56.
Forewings reddish or reddish-ochreous without longitudinal shades and without a transverse row of dots so the markings are practically obsolete, as in the type.

ab.rufescens-suffusa Tutt. Brit. Noct. 1891.1.p. 55 & 56.
Forewing reddish-ochroous, with a transverse row of dots and strongly developed longitudinal shades as in ab.crassicornis.

ab.lechneri Rebel. Berge's Schmett.1910.Ed.9.p.226. (fig. Tijdschr. Ent. 41.pl.2 f.3.) Forewings thickly black-grey dusted, only the veins, a streak on the median fold and a longitudinal spot in the cell remaining pale. The figure is very good.

ab.strigata Rebel. Berge's Schmett.1910.Ed.9.p.226. (fig. Tijdschr. Ant. 41.pl.2 f.2 With a toothed outer transverse line on all wings, also, on the forewings, some indication of an anti-median line.

Turner seems to think this the result of "a deposit of fluid which saturated the body and spread along the wings irregularly.", but we have specimens agreeing exactly with the description and figure.

ab.rufovenosa Schille. Zts./iss.Ins.Biol.1918.14.p.120.
The chief character of this form would appear to be the broad reddish veins and similarly coloured fringes, on the completely dark grey hindwings. The forewings are ochre-yellowish-grey with paler veins and outer row of black spots, dark grey suffused on the hind-margin and a similarly coloured streak running from the base below the median nervure, reaching the end of the cell.

ab.postradiata Cockayne. Ent. Rec. 1952.64.p. 191.pl. 8.f. 10. The hindwing, with the exception of the basal area, is thickly powdered with black scales and the nervures are very black, leaving the interneural spaces pale and giving a radiated appearance. On the forewing there is a broad black subcostal s streak running outwards from the base and another black streak running along the median nervure and extending on either side of it; from both these streaks thin black lines run on each side of the nervures out to the termen; there is a third shorter and broader black streak, not so well defined, running along vein l. The chief character, as in the preceding form, would appear to be the radiated hindwing.

ab. maxima Horm. & Alexinschi. Bull. Fac. Sti. Cernauti 1930. 4. p. 308. fig.

Noct.256. p.1.

Arenostola Hampson,

pygmina Haworth. Lep. Brit. 1809. p. 176. = fulva Hubner. Samml. Eur. Schmett. 1809-13. pl. 106 f. 496.

aberrational forms etc.

pygnina Haworth. typical form -- forewings reddish, hardly veined, hindwings fuscous.

fulva Hubner is hardly separable from pygnina, the figure being far too bright to be of much use, it is meant to represent the reddish form since Herrich-Schaffer refigures it far less bright and describes it as red. Tutt however invents the colour"rose"for Haworth's pygnina and separates Hubner's fulva as being extremely bright brick-red and, later, as bright ferruginous-red. As mentioned before it seems quite impossible to name an aberration of colour on the hand-painted figures in the older works, which vary in individual copies.

ab.fulva Hubner. Samml. Eur. Schmett. 1809-13.pl. 106 f. 496.
Treated here as a synonym of the type but many authors, Tutt, Jarren, Lempke, etc make it an aberration, on the strength of Hubner's richly coloured figure and describe it as "fulvous rufous", "extremely bright red or brick-red", "bright rust-red or bright red-brown" and "rich rufous".

If desired the name can stand for the reddest examples but in my opinion Haworth gave his name to the red form and Hubner's figure is an exaggeration on the part of the artist.

ab.pallida Stephens Ill. Haust. 1829. 3. p. 78. Forewings ochraceous-white, the costa and central nervure obscurely fuscescent. Hindwings whitish with a slight ashy tinge towards the outer margin.

ab.concolor Tutt. Brit. Noct. 1891.1.p. 44 & 45. (see Entom. 1888.21.p. 222)
The correct reference for this form is Brit. Noct (as above) not Entom. 21, which is Guenee's description of concolor (extrema), not a fulva form. Futt in his Brit. Noct. states that he gives the name concolor Tutt to the whitish form in the present species, with the following description — A whitish form, with or without transverse row of dots, with or without longitudinal shade.

ab. neurica Stephens Ill. Haust. 1829. 3. p. 79. Forewings ochraceous or pale fusco-rufescent, with a bifid fuscescent cloud at the base, enclosing a whitish space; the nervures, especially towards the apex, slightly fuscescent; an arcuated row of minute blackish dots in the outer area. Hindwings pale whitish—ash, the outer margin rather darker.

ab.ochracea Tutt. Brit. Moct. 1891.1.p. 44 & 45. Forewings bright yellow-ochreous, without longitudinal shades and with only the faintest trace of the transverse row of dots.

ab. ochracea-suffusa futt. Brit. Moct. 1891.1.p. 44.45.
Forewings bright yellow-ochreous, the spaces between the nervures powdered with dark scales, having the appearance of dark longitudinal shades.

ab.punicea Tutt. Brit. Noct. 1891. 1.p. 45.
Forewings pinkish-grey with the row of transverse dots more or loss developed but without longitudinal shades.

ab.punicea-suffusa Tutt. Brit. Noct. 1891.1.p. 45.
Forewings pinkish-gray, with the snaces between the nervures powdered with dark scales having the appearance of longitudinal shades, as in ochracea-suffusa Putt.

ab.fusca Lemoke. Tijdschr. Ent. 1942.85.p. 73. Ground colour of the forewings black-brown.

ab. transversa Staudinger. Cat. Ed. 3.1901.p.190.

Dull reddish-grey to reddish, with two distinct blackish transverse lines.

Described from Esthonia and possibly a subspecies there. Some English specimens show the transverse dots almost linking up into lines on the outer row, so the form may possibly occur here as a rare aberration.

ab.nigropicta Huene. Stett. Ent. Its. 1901.p. 157 is almost cetainly the same since Huene sent specimens to Staudinger but Draudt in Seitz 3. Suppl. p. 192 transversa Stgr. in pygnina and nigropicta in fluxa Hubner. Both forms are from Esthonia.

ab.lutea Cockayne. Ent. Rec. 1951. 63. p. 161. Ground colour of the forewings is clear yellow, with no trace of rufous.

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Noct. 257. p.1.

Arenostola Hampson.

extrema Hubner. Samml. Hur. Schmett. 1803-08.pl. 88 f. 412. = concolor Guenee. Noct. 1852. 5.p. 103.

aberrational forms etc.

ab.radiata /agner. Int.Ent. 3.1922.16.p.39.
Forewings showing along the veins an accumulation of dark scales giving a radiated appearance. Similar to the ab.nigristriata Stgr. of Senta maritima.

ab. depunctata Lempke. Tijdschr. Ent. 1942.85. p. 74.
The row of dots in the place of the outer transverse line fails.

Arenostola Hampson.

Noct. 258.

fluxa Hubner. Samml. Eur. Schmett. 1808-09.pl. 88.f. 413. = junci Boisduval. Ind. Meth. 1840.p. 134.

fluxa Hubner. typical form -- forewings bright red-brown. The figure is bad. junci Boisduval is made a synonym because, according to Guence, the specimen was devoid of scales, so the description "pale straw" is deceptive.

ab. saturata Staudingor. Cat. Ed. 2.1871.p. 167. Forewings dark reddish-brown, often totally red.

ab. hellmanni Eversmann. Bull. Soc. Nat. Moscow. 1843. 16.p. 548.
Forewings stone colour, similar to L. lithargyrea (sordide lithargyreae)
The colour is dirty, greyish ochreous, the tint of the less reddish form of lithargyrea. Turner calls it the "grey" form, but lithargyrea is hardly grey, and says Tutt describes it as grey, which is not so, Tutt gives Staudinger's description which is "pale, greyish or reddish straw-colour".
The form is as common in England as the redder forms, probably more so.

ab.expressata Krulikowsky. Rev. Russe Ent. 1907. 7. p. 11. (Soc. Ent. 23. p. 11.) Forewings with strongly emphasised black transverse lines.

ab.pulverosa Warren. Seitz.1911.3.p.236.pl.49 f.
The grey dusting very strong, the dots of the outer line obsolete, and the veins dark.



Moct. 259.

Arenostola Hampson.

morrisii Dale. Naturalist 1837.2.p.88. = bondii Knaggs. Trans.Ent. Soc. Lond. 1861.5.p. 133.

aberrational forms etc.

ab.impura Schwingenschuss. Verh.zool.-bot.Ges. Vien.1923.73.p.(28). Forewings with a spot-like, black-grey, darkening in the middle field along the veins, and streak-like darkening in the cells in the outer area.

error - ab. obscura Schwingenschuss. (Draudt in Seitz 3. Suppl.p. 192.) Draudt includes this form in error, it belongs to Agrotis latens Hon.

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Arenostola Hampson.

elymi Treitschke. Schmett. Hur. 1825. 2, p. 294.

aberrational forms etc.

ab. saturation Staudinger. Stett. Ent. Zts. 1889. 30. p. 47.

Described as an ab. and subsp., from Russia. Forewings darker mixed, and stronger marked than typical form; hindwings darker blackish-grey.

Staudinger cites Oberthur Etudes 5. pl. 9 f. 2 as belonging to this form but the figure in no way answers to his description. Turner has named this figure as a race -askoldensis - because of its smaller size and the row of little dots on the nervures of the hindwings.

ab.depunctata Nordstrom. Svenska Fjarilar.1940.p.192. The row of black spots, in the outer area of the forewing, absent.

ab.renifera Nordstrom Svenska Fjarilar.1940.p.192. The reniform fairly distinct.

brevilinea Fenn. Ent. Mon. Mag. 1864. 1.5. 107.

aberrational forms etc.

ab. sinelinea Farn. Entom. 1878.11.p. 103.
The short black line at the base of the forewing absent.
This is sometimes referred to as alinea in label lists.

ab.typica-suffusa Edelsten. Ent. Rec. 190214.p. 103. Suffused with dark smoky-gray scales.

ab.typica-nigrofasciata Edelsten. Ent. Rec. 1902.14.p. 103.
Nervures 2-5 edged with black, making a longitudinal fascia, more or less connected with central spot and basal dash.

ab. typica-bilinea Edelsten. Ent. xec. 1902.14. p. 103. The lowest spot of the ante-median transverse row, and the lowest of the post-median row, run into each other or unite, to form a black dash or streak, above the inner margin. This must be a rare form.

ab. typica-pallida Edelsten. Ent. Rec. 1902, 14, p. 103. Fowdered with light scales, especially along the costal margin.

ab.typica-rufescens Edelsten. Ent. Rec. 1902.14.p. 103. Ground colour of the forewings reddish.

ab. sinelinea-suffusa Edelsten. Ent. Rec. 1902. 14.p. 163. Forewings without basal line and suffused with dark snoky-grey scales.

ab. sinelinea-nigrofasciata Edelsten. Ant. Rec. 1902.14.p. 103.
Forewings without basal line, the nervures 2-5 edged with black, making a longitudinal fascia, more or less connected with the central spot and basal line

ab. sinclinea-pallida Edelsten. Ent. Rec. 1902. 14.p. 103. Forewings without basal line, powdered with light scales, especially along the costal margin.

ab. sinelinea-rufescens Edelsten. Ent. Rec. 1902. 14. p. 103. Forewings without basal line, the ground colour reddish.

ab. sinelinea-ochracea Edelsten. Ent. Rec. 1902.14.p. 103.
Forewings without basal line, the usual row of dots slightly indicated, the ground colour light ochroous, slightly dusted with black scales.

Moct262. p.1

Arenostola Hamson.

phragmitidis Hubner. Samml. Eur. Schmett. 1800-03. 51. 47 f. 230. = semicana Esper. Eur. Schmett. 1804. 4. (2). p. 54. pl. 189. f. 5.

aberrational forms etc.

phragmitidis Hbn. typical form -- forewings yellowish with rather broad reddish outer margins.

Since there is some doubt about semicana Esper it is placed provisionally as a synonym, although the margins are not red. It is possibly another species.

? ab.verecunda Eversmann. Bull. Soc. Nat. Moscow. 1848. 3.p. 219. The description as regards colour and pattern is practically the same as Tutt's pallida, the following form, but doubt is raised as to its species by Eversmann's statement that it is "the same size and shape as L. pallens" which phragmitidis is not. If it is phragmitidis, it has priority over pallida Tutt. Forewings unicolorous pale or whitish-yellow. Hindwings somewhat brownish except on costa.

ab.pallida Tutt. Entom. 1888. 21.p. 254. Forewings of a pale unicolorous whitish-ochreous, with a slight greenish tinge, perfectly clear and unspotted, and no trace of red.

ab. rufescens Tutt. Entom. 1888.21.p. 254. Forewings entirely suffused with rich deep red, the outer margin being slightly darker. Hindwings bright shiny grey, with paler nervures.

ab. olivescens Warren. Seitz. 1911. 3.p. 235.

Forewings smooth olive-grey, the hindwings dark grey.

'e have the type in the R.C.K.collction at Tring and it does not agree with the description, the forewings showing little or no grey, and the hindwings are not dark grey.

ab.morawitzii Menetries. Enum. Corp. Anim. Mus. Petrop. Leg. (3). 1863. pl. 16 f. 8. The figure shows the forewings very pale, almost white , over the basal third, gradually becoming more dusky towards the outer margins where they are blackish-grey, with no tint of red or yellow. If the figure is to be relied on it is an extraordinary form; there is no text except that Morawitz says that the specimen was worn but probably a phragmitidis.

ab.maculata Jarnecke. Neue Beitr. Syst. Ins. 1922. 2. p. 93. Forewings showing in the region of the reniform a small dark, dull ochre-yellow to yellow-brown, spot, and an orbicular of similar colour. Both dark spots stand out sharply from the pale straw-yellow surrounding area.

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Noct. 263. p.l.

Oria Hubner.

musculosa Hubner. Samml. Eur. Schmett. 1803-08.pl. 78 f. 363. = frumentalis Lindemann. Bull. Soc. Nat. Moscow. 1883. 1.p. 145.

aberrational forms etc.

musculosa Hubher. typical form -- the figure of Hubher is very bad, it would seem to suggest a yellow ground with greenish-grey stripes, not sandy-brown as most of our British specimens show. frugmentalis Lindemann had the forewings pale yellowish scaled with two white longitudinal lines.

ab.flava Freyer. Neu. Beitr. 1846. 4.p. 142.pl. 370 f. 2. Forewings fawn or faded yellow, varying to pale brown, the two stigmata white, the longitudinal stripes white; all the veins brown and clearly marked. Hindwings dirty white to brown-yellow.

This is the form usually found in England. Thether or not Hubner's figure is meant to represent this is impossible to say, it is separated here as being sandy-brown without the grey tint.

ab. olivina Alpheraky. Oberth. Lep. Comp. 1913. 7. p. 233. pl. 194 f. L. Forewings grey-olive, with the ordinary markings of the type white-yellowish.

ab. dirini Alpheraky. Oberth. Lep. Comp. 1913. 7. p. 233. pl. 194. f. M.
Forewings reddish-yellow or rust coloured, the longitudinal streaks whitish.
The figure shows the wings almost orange with a slight brown tint. Alpheraky says the figure of this and the preceding are a true likeness.

Noct. 264.

Wonagria Ochs.

- algae Esper. Eur. Johnett. 1789. 4(2), p. 441. pl. 140 f. 1 & 2.
- = cannae Ochsenheimer. Schmett, Eur. 1816. 4.p. 82.
- = russa Eversmann. Bull. Soc. Nat. Mosc. 1847.3. n. 79.

aberrational forms etc.

algae Esper typical form --- male with forewings rufous, female forewings pale ochraceous; the veins blackish, a series of blackish spots towards the margin. Esper's plate was issued long before the text; Borkhausen gave a description of the figure in 1792 but Esper was the author.

ab. brunneo-ochrascens Strand. Arch. Naturg. 1915. 81. A 11.p. 165. Pale brownish-ochroous slightly tinged with rufous. Presumably a male form with the appearance of the female.

ab.fusca Bowles. Ent. Rec. 1898. I).p. 287.

= funata Varren. Seitz. 1911. 3,p. 238.pl. 49, row K.

Male-forewings very dark fuscous-brown with the markings scarcely visible. In the female fuscous-brown, the markings distinct.

'arren's funata had the forewings, especially in the male, dark brown or black-brown.

ab. rosea Bowles. Ent. Rec. 1898. IO. p. 287.
Male - forewings, fringes of hindwings, of a warm red. Female suffused with a rosy shade. Much brighter in fresh specimens, fading later.

ab.liturata /arren. Seitz. 1911, 3.p. 238.pl. 49 row K. Forewings with both lines complete and dentate throughout, the median vein thickly black.

The figure is bad and does not agree with the description.

ab. obsoleta Bowles. Ent. Rec. 1898. IO. p. 287.
Desribed from single female. Forewings pale yellow, wainscot markings wanting, except the two lowest black dots.

ab. impunctata Lempke. Tijdschr. Ent. 1941. 84. p. 344. On the forewings the outer row of black dots fails. A slightly more extreme form than the preceding.

sparganii Esper. Eur. Schmett. 1786. 4(2).p. 481.pl. 148 f. 2 . 3.

aberrational forms etc.

sparsanii Esper. typical form -- forewings yellowish with faint reddish tint, dusted with dark scales; a crescent shaped spot in place of the reniform and an outer row of dark spots.

ab. obsoleta Tutt. Brit. Noct. 1891.1.p. 53. = 'uniformis Dufrane. Lamb. 1935.35.p. 54.

Forewings pale ochreous as in the type, sparingly scaled with fuscous scales, the nervures simply a little more dusky than the ground, the black lunule and all the markings of the central area, obsilete, the two transverse rows of lots fainter than in the type. Dufrane's form had only the external row of dots.

ab. impunctata Turner. Ent. Nec. 1930. 42. Suppl. (Brit. Noct) p. (155). = immaculata Dufrane. Lamb. 1935. 35. p. 54.

Forewings with no trace of the outer row of black dots paralled with the margin Dufrane's form had the spots forming the lines, even the external one, absent.

ab. bipunctata Tutt. Brit. Noct. 1891. 1.p. 53.

Forewings pale ochreous with no trace of the normal dark shade along the median nervure and no scattered black scales. A short black line on the median nervure, just before the centre of the wing, above which can be traced the faintest possible outline of the orbicular; the black lunular mark (which is the lower part of the roniform) and this short black line stand out conspicuously, making two distinct characters on the plain ground. The outer row of dark dots less distinct than the row placed just within the fringe.

ab.rufescens Tutt. Brit. Woct. 1891. 1.p. 54. (see Hubner Eur. 3c mett. fig. 549) = rufescens Strand. (nom. preoc.) Arch. Naturg, 1915. 85. A 11.p. 165. = rufescentella Strand (nom nov. pro rufescens Strand). Lamb. 1927. 27.p. 86. The ground colour much suffused with reddish-ochreous, the characteristic markings and fuscous shade under the median nervure generally strongly developed. These red varieties are exceedingly suffused-in some instances-with fuscous scales under all the nervures and the hindwings especially in the males, are sometimes very dark. Hubner figures this red form, fig. 549. Strand names the red form-strongly suffused with reddish, hindwing suffused with black except the terminal area. This seems no different from Tutt's rufescens, but Strand, finding that Tutt had used the name, re-names his own rufescens rufescentella without apparently realizing that the forms were the same.

ab.rosea Wightman. Ent. Rec. 1930. 42. Suppl. (Brit. Woot).n. (155). Forewing with normal markings but pale pink with a slight orange tint, the nervures paler pink. Hindwings pale ochreous-white.

ab.lutea Vichtman. Ent. Rec. 1930. 42. Suppl. (Brit. Woct.) p. (155. Forewing with normal markings but the ground colour bright clear sulphur. Hind-wings paler yellow with black suffusion at the base.

ab.rufa Wightman. Ent. tec. 1930. 42. Suppl. (Brit. Woot) p. (156)
Forewings with normal markings but the ground colour rich, deep, coppery red.
Hindwings pale reddish, with dark grey streaks from base to centre of wing.

ab. nigrostriata lightman. Ent. Mec. 1930. 42. Suppl. (Brit. Moct) p. (156). Colour as in type. A black streak under the median nervure from the base to the postmedian row of dots; a fine blackish line just inside the hind-margin(innermargin?) and another just below costa. Hindwings with distinct black-grey streaks from base to centre of wing.

. ab.roseoradiata Wightman. Ent. Rec. 1930. 42. Suppl. (Brit. Noct) p. (156). Colour as in type but the black lines below costa and above hind-margin (inner-margin ?)replaced by streaks of purplish-red colour, the dark shade under the central nervure also suffused with purplish-red, which spreads out on to the adjacent areas of the wing, so that the major portion is red or red-suffused yet the pale ground colour, quite free from scattered red scales, is present as two pale wide streaks, one just above the central nervure, and the other halfway between the dark shading under the median nervure and the inner margin. Hindwing pale smoky-ochreous with distinct black-grey streaks from base to centre and tinged with pink.

ab.deleta Wightman. Ent. Rec. 1930. 42. Suppl. (Brit. foct) p. (156). Similar to the preceding, with streaks of purplish-red colour below costa and above inner margin, but the dark shade under the central nervure is absent.

ab.clara Turner. Ent, Rec. 1930. 42. Suppl. (Brit. Noct) p. (155). Extremely light in ground colour. The hindwings are very pale straw, almost white, with just a uniform slightly creamy tinge. The forewings are only slightly darker, ochreous cream, without any suggestion of rufous, brown or pink. The marginal and antemarginal lines of black points are complete, only three dots in the lower part of the reniform are present and a dark scale or two represent the basal transverse line.

ab. unimaculata Dumont. Bull. Soc. Ent. France. 1926.p. 168.

Forewings with the marginal line of black points alone well marked but less stricted by than in the type; the postmedian row is scarcely indicated by a minute point on each nervure; the reniform is only represented by a black mark made up of four dots. There is a complete absence of the powdering or dusting on the nervures.

ab. obscura Dufrane. Lamb. 1935. 35. p. 54. Forewings uniformly sprinkled with grey-reddish atoms, the spots forming the external line only just visible. Hindwings very dark.

ab. nigrosignata Cockayne. Ent. Rec. 1952.64.p. 192.pl. 8 f. 11. On the forewing there is a short black streak at the base running along the median nervure; there is a black spot between nervures 2 & 3, and another occupying the lower end of the reniform; there is an oval black spot in the upper part of the reniform, the external outline forming the external outline of the stigma, and there are scattered black scales uniting this with the black spot in the lower part; along the termen there is a row of black interneural dots, from each of which dark scales run out into the inner half of the fringe.

ab.nigrescens Horch

Verh, Ver. Waturw. Heimatforsch. Hamburg.

.25.0.20

. Noct. 266. p. 1.

Monagria Ochs.

typhae Thnbg. Ins. Suec. (Dissert)1784.1.p.3. = arundinis Fabr. Mantissa 1787.2.p.141.

= latifolia Lang. Verz. Ed. 2.1789. p. 142.

aberrational forms etc.

typhae Thnbg. typical form -- light brownish grey, with fuscous striation.

?.ab.nervosa Esper. Hur. Schmett. 1790. 4(2).p. 479.pl. 148 f.l.

Most authors include this as a form of typhae but in my opinion it is not.

Esper figures the dark form of typhae on an earlier plate(pl. 40 fig. 5) as a var., and the typical forms-figs. 3 & 4, and therefore knew the species well. The figure of nervosa has black hindwings and Esper's description says they are unicolorous black-grey, a colour I have never seen in typhae hindwings, the form is therefore not included here. Borkhausen renamed nervosa Esper as Phalaena fraterna and here again the description is not satisfactory for the dark brown typhae, the forewings were light grey-brown, the hindwings grey-brown.

ab.fraterna Treitschke. Schmett.Eur.1835.10.(2).p.99.
This seems the most satisfactory name and author for the dark brown to blackish form. The description says" unicolorous brown or blackish, and almost markingles! Various authors give Borkhausen as the author but his description does not fit the dark form of typhae, the forewings being described as light grey-brown and the hindwings grey-brown. Borkhausen's fraterna is the same as Esper's nervosa which on account of its blackish hindwings is not included here.

ab. obsoleta Dufrane. Lamb. 1932. 32.p. 83. On the forewings the black spots before the submarginal line are completely effaced, or reduced to barely a few black atoms.

ab. punctata Dufrane. Lamb. 1932. 32. p. 83. On the forewings the black spots before the submarginal line are large, very black, and extended.

Woct. 267. p.l.

Monagria Ochs.

geminipuncta Haworth. Lep. Brit. 1809. p. 176.

= guttans Hubner. Samul. Eur. Schmett. 1814-17. pl. 137. f. 628 629.

aberrational forms etc.

geminipuncta Haworth. typical form -- forewings reddish-fuscous, the inner margin more rufous. Two white spots in the remiform.

ab.paludicola Hubner. Samml. Eur. Schmett. 1814-17.pl. 136 f. 624. (nec. pl. 139 f. 637.) The figure shows the forewings dark brown, the roniform edged on its inner side with white and not separated into the two spots of the type form. The veins towards the outer margin dusted with white, probably somewhat exaggerated. Hubner figures another paludicola, a male, which is nothing like the first figure a female, it has orange-brown costa and inner margin, with no white on the veins, see pl. 139 f. 637.

ab. unipuncta Tutt. Entom. 1888. 21. p. 226. Like the type but with only the lower half of the reniform white, therefore with only one white point.

ab. obsoleta Tutt. Entom. 1888. 21. p. 226. Like the type but with the white twin spots, characteristic of the type, altogether absent.

ab.pallida Tutt. Brit. Noct. 1891.1.p. 51. Forewings pale reddish-ochreous with two white spots in the reniform.

ab.pallida-unipuncta Tutt. Brit. Toct. 1891.1.p. 51.
Pale reddish-ochreous with only one white spot in the reniform.

ab.pallida-obsoleta Tutt. Brit. Woct. 1891.1.p. 51. Pale reddish-ochreous, with no white spots in the reniform.

ab.rufa Tutt. Brit. Noct. 1891.1.p.51. Clear reddish-brown, two white spots in the reniform.

ab.rufa-unipuncta Tutt. Brit. Noct. 1891.1.p. 51. Clear reddish-brown, one white shot in the reniform.

ab.rufa-obsoleta Tutt. Brit, Moct. 1891. 1.p. 51. Clear reddish-brown, remiform without any white dots.

ab.fusca Tutt. Brit. Moct. 1891.1.p.51.
Forewings blackish-fuscous or sooty-black and the reniform with two white spots.

ab.fusca-unipuncta Putt. Brit. Noct. 1891. 1.p51.
Forewings blackish-fuscous or sooty-black, with one white spot in the reniform.

ab. nigricans Staudinger. Cat.ed. 1,1861.p. 46. (Samml. Eur. Schmett.pl. 1.6 f.24 Forewings blackish. Staudinger cites Hubner's paludicola, Samml. Eur. Schmett. fig. 624, which however shows white dusted veins in the marginal area of the forewing. In his Cat.ed. 2, Staudinger says the form is totally blackish, the reniform indistinct.

ab. nigropunctata Krombach. Int. Ent. 2.1920.13.p.180.
The reniform and orbicular each showing as a black spot.
[utt's obsoleta, which had the two white spots in the reniform absent, presumably had no orbicular although this is unlikely, practically all geminipuncta showing a small black dot. The present form can only be separated from obsoleta by the reniform and orbicular being very definite black spots, it is more than probably a synonym of obsoleta

ab. jaeschkei Warnecke. Int. Ent. 1.1929.23.p.7.fig.
Worewings with distinct dark doubled transverse lines, which border the middle field on both sides, therefore on the basal, as well as the outer-marginal, side.

Noct. 268. p.1.

Monagria Ochs.

dissoluta Treitschke. Schmett. Eur. 1825. 5(2). p. 319. (citing Hubner, S. Eur. Schmt. f. 659-61)

- = hessii Boisduval. Ind. Meth. 1840.p. 134.
- = brunnescens Rangnow. Int. Ent. 4.1934.27.p. 531.

aberrational forms etc.

dissoluta Treitschke. typical form -- forewings black-brown, figs. 559-661 in Hubner. Samml. Eur. Schmett.pl. 144. The underside showing a dark discoidal on all four wings. This is the melanic form, much less common than the light form ab. arundineta Schmidt, in Britain.

ab.arundineta Schmidt. Stett. Ent. 4.1858.p. 369. (H. -S. Syst. Bearb. 2.pl. 68 f. 347-8) Forewings brownish-yellow. The common form in Britain, the females less marked with blackish dusting, especially in the middle area; in the males there is a horizontal line, or streak, of dark brownish or blackish dusting, from the base almost to the margin.

ab.flava Turner. Ent. Rec. 1930. 42. Suppl. (Brit. Woot) p. (147). Forewings yellow with the dark markings suppressed. The usual colour is a rufous, tending to pinkish, and not yellow without pinkish tinge.

ab. rosea Tutt. Entom. 1888.21.p. 225.

Like the light form ab. arundineta but the whole of the forewings suffused with a rich rosy colour.

Described under neurica Hubner, the name used for this species at Tutt's time of writing. For neurica Hbn., see the next species Woot. 269.

ab. striata Lempke. Fijdschr. Ent. 1941. 84. p. 347. Ground colour of the forewings brown-yellow to brown, with dark suffused costa and strong dark suffusion along the median vein.

neurica Hubner. Sarml. Eur. Schmett. 1803-08.pl. 82 f. 381. =edelsteni Tutt. 1908.20.p.164.

aberrational forms etc.

neurica Hubner. typical form -- forewings greyish-brown.

ab.rufescens Edelsten. Ent. Mon. Mag. 1911.47. p. 207. "Reddish form".

ab.fusca Edelsten. Ent.Mon.Mag.1911.47.p.207. "Blackish-brown form."

ab. nigra Wightman. Ent. Rec. 1931. 43. p. 106.
"An extreme black form, quite distinct from ab. fusca Edelsten." Forewings intense black, unicolorous, except for two small white dots present in the type and aberrations of this species. Hindwings nearly as dark as the forewings; the thoracic crest white as in the typical form.

ab.pallida Lempke. Tijdschr. Ent, 1941.84.p. 346. Forewings pale yellowish-brown.

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Noct.270. p.l.

Coenobia Stephens.

rufa Haworth. Lep. Brit. 1809. p. 260.

aberrational forms etc.

rufa Haworth. typical form -- forewings unicolorous rufous. To mention is made of a fuscous longitudinal streak.

ab, despecta freitschke. Schmett. Eur. 1825. 5(2).p. 311.
Forewings dirty yellow-brown with strong gloss, rust coloured towards the fringes.
This is the original description by Treitschke; Hubner's figure of it, and Herrich Schaffer's description and figure, do not agree with it in colour. Futt and Turner apparently did not know of Treitschke's description since they give

ab.lineola Stephens. Ill. Haust. 1829. 3. p., 123.
Forewings greyish-red, with a longitudinal fuscous streak at the base and a faint transverse row of minute fuscous spots.
Stephens obviously used the name "lineola" because of the longitudinal fuscous streak. Haworth does not mention this in his description of rufa so Stephens presumed it had no streak; it must be assumed that it is not present in the type.

ab. pallida Tutt. Entom. 1888. 21. p. 208.

only Hubner as author.

= pallescens Tutt. Entom. 1888, 21. p. 209.

"A pale grey form with no trace of red.". Putt named this form again as "pallescens" on the next page with the description - varying from pale grey to almost white, without a trace of the rufous.

ab.fusca Bankes. Ent. dec. 1909.21.p.4.

= rubicundipennis Strand. Lep. Catalogus. 1912. part 5.p. 45.

Forewings dark fuscous, somewhat tinged with red. Hindwings dark grey, maler towards the base.

Strand named Hampson's ab. 1, which was Banke's Dorset form fusca.

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Noct.271.

Chilodes. Herrich-Schaffer.

maritima Tauscher, Mom. Mosc. 1806. 1.p. 178.pl. 13 f. 5.

= ulvae Hubner. Samml. Eur. Schmett. 1814-17.pl. 139 f. 655-36.

pl. 145 f. 666-668.

= sericea Curtis. Brit. Ent. 1828. 5. p. 201.

aberrational forms etc.

maritima Tauscher. typical form --- forewings greyish. ulvae Hubner--the two sets of figures are so different, obviously by different artists, that it seems best to make it a synonym of the type

? ab.anella Stephens. Ill. Haust. 1834. 4. p. 297.
There is too much doubt about this form to include it in this species. /ood figured it in his Ind. Ent. 1839. no. 1437. p. 207. and this is a Pyrale, in which family Stephens himself placed it. Hampson seems to have been the first to place it as maritima, followed by Warren in Seitz. The insect was captured in the Jew's Burial Ground at Stepney, not a likely place for a reed-loving species like maritima.

ab. bipunctata Haworth. Trans. Ent. Soc. Lond. 1812. 1. p. 337.

= nigromaculata Schmidt. Stett. Ent. Z. 1858. 19. p. 361.

Forewing with two black spots, one near the centre, the other beyond the centre. Schmidt's nigromaculata had quite black stigmata and a black longitudinal streak at the base.

ab.combinata Edelsten. Ent. Rec. 1910. 22. p. 149. pl. 6. f. 3.

= spormanni Heydemann. Int. Ent. 2. 1926. 19. p. 359. pl. 3 (Heydemann). fig. 29.

A combination of ab. bipunctata Haworth and nigrostriata Staudinger.

Heydemann's spormanni had deep black stigmata and black streaks between the veins as in ab. nigrostriata Stgr.

ab. nigrostriata Staudinger. Cat. Ed. 2. 1871. n. 107. Forewings with many fine black streaks running parallel with the veins.

ab.nigricostata Staudinger. Cat.Hd.2.1871.p.197. Forewings with a broad black stripe along costa.

ab, wismariensis Schmidt, Stett, Ent. 1, 1858.19.p. 51.
Forewings with a broad black longitudinal streak from the base to the subterminal area, enclosing the stigmata, which however are whitish-margined and quite recognisable. The streak narrows to a point at the base but is broad and concave at the subterminal end,

ab.conjuncta Rangnow. Int. Int. 2.1912.6.p.190. On the forewings the two black spots of ab. binunctata Mar attend by a broad black bar.

ab. obsoleta Vightman. Ent. Rec. 1941. 53. p. 15.
Unicolorous, the white, and slightly darker lines, of the typical form, are absent; there is a faint row of dots along the outer margin and postmedian, and the two stigmata can just be seen.

Noct.272.

Panemeria Hubner,

tenebrata Scop. Ent. Carn. 1763. n. 230.

=domestica Hufn. Berl. Mag. 1766. 3. n. 83.

= arbuti Fabr. Syst. Ent. 1775. n. 616.

= policula Lang. Verz. 1782. n. 159.

= fasciola Esper. Eur. Schmett. 1790. 4(2). n. 555. nl. 163 f.1.

= heliaca Hubner. Samml. Eur. Schmett. 1800-03. pl. 64 f. 316.

aberrational forms etc.

temebrata Scop. typical form -- hindwings yellow band occupying about one third of the wing, the basal third black, the marginal third black with white fringe. Forewings brown with varied markings.

Entom.

ab. albescens Cockerell., 1889.22.p. 126. (see Tewman Brit, Noths.p. 442.) The yellow of the hindwing replaced by white.

ab. nigrescens Cockayne. Unt. Rec. 1944. 56. p. 56.
The yellow of the hindwings replaced by blackish-brown.

ab.flavescens Dannehl. Ent. Z.1933.47.p.19. The band of the hindwings is pale yellow, not deep yellow of the type. The specimen fresh, not faded.

ab. obscura Spuler. Schmett. Eur. 1907. 1. p. 279. The yellow band of the hindwing reduced to barely a third of its usual size.

ab. satiata Dannehl, Ent. 1.1933.47.p.19. Forewings unicolorous dull, dark brown, the markings completely suppressed, the pale area in the central part of the wing absent.

foct.273.

Emmelia Hubner.

trabealis Scop. Ent. Carn, 1747, -1 10. = sulphuralis Linn. Syst. Wat. 1767. Ed. 12. p. fl.

= arabica Hufn. Berl. Hag. 1767.3.n. 412. = sulphurea Schiff. Wien Vorz. 1776.p. 93.

= trabeata Bkh. Scriba Beitr. 1791.153, pt. 10 f. 8.

= lugubris Fabr. Ent. Syst. 1/77.3.0.467.

aberrational forms etc.

ab. confluens /arren. Seitz.1913 pl.52. fig. row g. Farren does not mention this form in his text. The figure shows some of the black spots united, the median black horizontal line is thicker than usual and includes the spot usually separated, and just above it. The insect appears darker than normal although actually it is not very different from the typical form. The Type is in the Kothschill coll. at Tring.

ab. nigricostata Stauder. Ent. anz. 1924. 4. p. 110.
Forewings with the whole costal margin broadly black, swallowing up the three black costal spots.
Draudt and Turner wrongly give Strand as author.

ab. crassistriga Stauder. Ent. Anz. 1924. 4.p. 110. Forewing with the normal yellow streak, which lies between the two black longitudinal bars, completely filled up with black As in the preceding, Draudt and Turner give Strand as the author instead of Stauder.

ab. unculata Dannehl. Ent. 1.1926.40.p.15.

Transitional to ab. nigra Erschoff, the following form. Forewing with the black spots so united that, besides the outer transverse line, only a short submarginal line remains; for the rest, all the black markings are concentrated into a broad bar along the median vein from the base as far as the outer transverse line, and a similar bar along the costa. Between these black bars there only remains fine yellow lines in the form of hooks.

ab. nigra Frschoff. Lep. Fedschenko's Voyage. 1874.p. 52.nl. 3 f. 50. Forewings almost wholly black, only the subterminal area somewhat maler. e have two specimens of this form from Aussia, the wings show a strong gloss.

Noct. 274. p.l.

Lithacodia Hubner.

fasciana Linn. Faun. Susc. 1761.5.342.

= pygarga Hufn, Berlin Mag. 1766.p.

= strigilis Schaeffer. Icones 1769.pl.179 f.4-5.

= polygramma Esper. Eur. Schmatt. 1790. 4(2).p. 470.pl. 146 f.7.

= praeduncula Borkh. Eur. Schmett. 1792. 4. p. 175.

= fuscula Hon. Samul. Eur. Scomett. 1800-03. 71. 60. f. 297.

= fusca Haworth, Lep. Brit. 1809. p. 261.

aberrational forms etc.

fasciana Linn. typical form -- forevings greyish-brown, with wide white fascia.

ab. albilinea Haworth. Lep. Brit, 1809, p. 261. The white blotch at the anal angle of the forewing reduced, only a white edge to the postmedian (elbowed) line, remaining; the subterminal almost obliterated.

ab. guenei Fallou. Ann. Soc. Ent. Fr. 1864. p. 27. pl. 1. f. 3. The ground colour of the tint of fresh nuts or wood-coloured brown, mixed with darker brown, principally in the median area, the stigmata very pale, almost white. The elbowed line is followed by a clear space, in which the indistinct subterminal line is absorbed.

The figure shows the ground colour yellowish-brown with normal blackish marking but the usual white blotch at the anal angle completely absent, only a faint trace of white remaining on the upper part of the postmedian line, as a very fine fine edgeing.

This form is very close to the preceding ab. albilinea but more extreme, there being even less white on the postmedian line. It was described originally as a Bryophila but Fallou later declared it an aberration of E.fuscula (fasciana).

ab. sordida Hannemann. Int. Ent. 1.1917.10.p.146.

Paler or lighter; forewings, hindwings and abdomen, yellowish-grey suffused.

The description is vague, the form may be a dilute.

ab. ochrea Derenne. Lamb. 1928. 28. p. 78. Forewings of a brown-red, with the entire lower part of the subterminal and terminal areas, and also the fringe, light yellow. All the areas which, in the type form are white, are in this form light yellow.

ab. albomarginata Spuler. Schmett, Eur. 1907. 1.p. 294. The white area, or blotch, at the anal angle of the forewing, extended to beyond the subterminal line and up to the costa, so that the outer area of the wing is almost completely white.

ab. brunnescens Lempke. Tijdschr. Ent(1946).1949.90.p.89. Ground colour of the forewings clear dark brown, circumscription of the stignata white, sharp, narrow, white postmedian line from costa to inner margin. Presumably the white blotch at the anal angle is present

Toct. 275.

Eustrotia Hubner.

olivana Schiff, Verz. 1775. p. 126.

= bankiana Fabr. Spec. Ins. 1781. 2. p. 275.

= argentula Hubner. Beitr. 1787.1(2). n. y. pl. 4 %.

= olivea Hubner, Jamul, Eur. Schmett. 1800-03. -1, 50. 1. 1/4.

aberrational forms etc.

olivana Schiff, typical form -- olive-green with two silver stripes.

ab.rufescens Tutt. Brit. Moct. 1892. 4.p. 7. The normal olive-green ground colour replaced by reddish-brown.

ab. obsoleta Tutt, Brit. Woct. 1892. 4.p. 7. This is not the same as oblitescens Schultz, Turner gives a wrong description. The two transverse white lines reduced in width, becoming very narrow and almost linear.

ab. oblitescens Schultz. Ent. 1.1907.21.p.78. The two transverse lines of the forewing showing a reduction in their length, so that they do not reach either the costa or the inner margin. Mostly only one stripe is so affected.

Turner gives Tutt's description of obsoleta for this form.

ab.confluens Schultz. Ent. 1.1907.21.p.79. figs.p.78 A,B,C. Schultz describes three very different forms under this one name, all showing gradations of the joining-up of the two transverse lines of the foreving. The first fig. A shows the two lines joined by a horizontal white bar in the middle of the wing. Fig.B. shows the two lines completely united in their upper half but still divided by ground colour in the lower half. In fig.C the two white lines are completely joined throughout their entire length, forming one broad stripe.

Schultz says that since these are all forms pointing to the eventual confluence of the stripes, they should have the same covering name, although their appearance is so different.

ab. nigrosparsata Osthelder. Schmett. Sudbayern. 1917.p. 3-46 pl. 16 f. 15. The silver bands strongly covered over with black. The figure shows the silver lines black dusted, especially in their lower halves

ab, funeraria Draudt, Seit: 1965.6. Suppl.p. 207. pl. 45 row b. The silvery white stripes appear leaden-black from the olive-brown ground colour, or are even completely obliterated.
The figure shows the stripes faintly indicated.

ab. uniformis Draudt. Seitz.1935.3. Suppl.p.207.pl.43 row b. All the markings invisible, except a very fine white subapical oblique streak and indications of a whitish submarginal line.

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ab. albescens Draudt. Seitz.1935.3. Suppl.p.207.pl.23 row b. Forewings with the basal and marginal thirds almost pure white, so that the silvery-white transverse lines almost disappear therein and only an oblique pale brownish central band remains.

ab. nowickii Schille. Polsk. Pismo Ent. 1923. 2.p. 109. The forewings are only blackish-brown in the basal and central areas, marginal area glossy silvery-white like on the transverse bands, only dusted with blackish-brown between the veins. Description from Seitz, I have not seen the original.

ab.tripuncta Jost. Ent. 1.1950.60.p.30.fig.2. The silvery-white stripes of the forewing reduced to so great an extent that there only remains three white spots, in the positions of the stigmata -- the reniform is the largest, the orbicular and claviform about half the size of the reniform; all three are finely black edged.

ab. signata Lempke, Tijdschr, Ent. (1946) 1949.90.p. 92. The two white lines of the forewing bordered on both sides by a fine black line.

ab. edentata Lempke. Tijdschr. Ent. (1946) 1949. 90. p. 92. The inner white line of the forewing straight, without projections.

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Moct. 276.

Eustrotia Hubner.

uncula Clerck. Icones 1759.pl.3.f.7.

= uncana Linn. Faun. Suec.1761.Hd. a.p. 342.

= singularis Hufn. Berl. Mag. 1766.3.p. 396.

= unca Schiff. Vien Verz. 1775.p. 91.

aberrational forms etc.

uncula Clerck. typical form --forewings fuscous-brown, the stripes etc., whitish.

ab. obscurior Spuler. Schmett. Eur. 1907. 1. p. 293.
Forewings with the ground colour darkened to red-brown, the inner marginal stripe darker tinted and the other light markings somewhat brownish tinted.

ab.lineola Dannehl. Ent. Z. 1926. 40. p. 15. On the forewings the outer of the two white lines, which form the white outer-marginal stripe, is covered or suffused so that only the inner one is left, as a fine silvery-white line.

ab.rufotincta Kolb. Mitt.Munch Ent. Ges. 1930. 20.p. 61 & 62.

Red form. Forewings suffused with red. brown especially towards the costal strips. The costal stripe is more or, less reddish suffused, in some individuals almost rosy, and the light whitish shading on the marginal side of the outer line fails completely, often there is a pronounced reddish band. Hindwings are rather weakly reddish suffused, the fringes in particular show a reddish sheen.

ab. clarivittata Hordstrom. Svensk. Fjarilar. 1940.p. 200.
Forewings with the transverse line and waved line, instead of being separated by a fine dark line, are united to form one broad whitish outer marginal band.

ab.triangulata Lempke. Tijdschr. Ent. (1946) 1949. 90. p. 91. The orbicular and remiform joined by a whitish line, so that a dark triangle is cut off.

ab.pupillata Lempke. Tijdschr.Ent. (1946)1949.90.p.91. The reniform stigma with a dark centre. Most of our specimens shows some dark shading in the reniform, Lempke presumably means something more extreme, otherwise the form was hardly worth naming.

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Woct. 277. 0.1.

Marias Hubner.

clorana Linn. Faun. Suec. 1761. Ed. L.p. 343. = viride Retz. Gen. Spec. Ins. 1783. p. 54.

aberrational forms etc.

ab.flavimargo de Joannis, Bull. Soc. Ent. France, 1908.p. 46. (Nig. ann. Boc. 1. Tr. 1908 pl.15 fig.7. The external margin of the forewings is narrowly borders with yellow, sometimes with some brown at the base of the fringe.

ab. hemixantha de Joannis. Ann. Soc. Ent. Fr. (1908) 1909. 77. v. 752. pl. 15 f. 8. An extreme form of the preceding in which the yellow of the border extends over almost all of the wing.

The coloured figure shows more than half the wing yellow.

Noct. 278. p.l.

Bena Billberg.

fagana Fabricius. Spec. Ins. 1781. 2. p. 276. (female).

= prasinana(auct. nec. Linnaeus.)

= viridis-lineata Retz. Gen. Spec. Ins. 1783. p. 45.

= sylvana Pabricius. Ent. 3yst. 1794.3(2).p. 244. (male)

aberrational forms etc.

fagana Fabricius. typical form -- the female showing three white oblique stripes, the male only the outer two, with the termen ferruginous. This is the Continental form, the British form is separated by Warren as subsp. britannica. See below.

subsp. britannica Warren. Seitz. 1913. 3. p. 297. pl. 53 row k. All three lines of the forewing silvery white, the costal and inner margins of the male are reddish only at apex and tornus respectively. The latter character is not constant, some of our English specimens show the outer margin red from apex to tornus.

ab.millieri Capronnier. Ann. Soc. Ent. Belg. 1883.27.p. XCIX. (Fig. Mill. Icones. 3.pl. = rubrostrigata Rebel. Berge's Schmett. 1910. Ed9. p. 423. (Fig. Mill. Icones. pl. 116.) = rufilinea Warren. Seitz. 1913.3.p. 297.pl. 53 row k. (ab. 2. Hampson Cat. Lep. XI.) The coloured figure in Milliere's Icones vol. 3.pl. 116 f.l, from which the first two authors described their forms, shows the red tint of the fringe extending in a well developed degree along the inner margin and up the postmedian line to the costa, especially towards the latter, and along it to the apex of the wing. Warren's rufilinea had the outer(postmedian) line marked with red. This was described by Hampson as "ab. 2." in his Cat. Lep. Phalaenae. 11.p. 514.

Varren made "millieri Capronnieri." a synonym of the type form but it is the same as his rufilinea, and has priority over it.

ab. trilinea Cockayne. Ent. Rec. 1951.63.p. 161.pl. 5 f. 2. The three oblique white lines are broader than usual and very sharply defined; the ground colour is darker green and the pale shading in the median area and elsewhere is almost entirely absent.

ab.leucozona Cockayne. Ent. Rec. 1951. 63.p. 161.pl. 5 f.l. On the forewing there is a broad white band in the median area bordered on each side by an oblique green line, separating it from the first and second oblique white lines; on the distal part of the wing there is more white than usual; in most examples it is entirely white with the exception of two green oblique lines the basal area is green. All the examples are females.

ab. anargyria Cockayne. Ent. Rec. 1951. 63.p. 161. The silvery-white stripes of the forewing are absent in the male and absent, or almost so, in the female, being replaced by pale green.

ab.argyrozona Richardson. Ent. Rec. 1952.64.p. 271.pl.11 f.25.
Ferevines crossed by a broad silvery-white band in which traces of green are visible at the upper and lower ends. This band is formed by a fusion of the first and second white cross-lines, which are otherwise absent; the third line is present and is especially pronounced at its upper end.

Noct. 278.

? ab. bilineata Slevogt. Soc. Ent. 1901. 16.p. 57. (not a fagana form.)

By the description this form is almost certainly the same as fiorii Costantini which, from our series in the Rothschild coll, is a different species although Lempke includes it in fagana. Our series were named hongarica by Tarren (Scitz 3.p. 297) which is said to be a synonym of fiorii Costantini. If bilineata is the same, it has priority over fiorii. None of these is treated here as an aberration of fagana, the form similar to it in fagana is ab. bilinea Richardson, which is obviously a fagana form and looks quite different from the series of fiorii (hongarica) from Hungary.

ab, bilinea Richardson. Ent. Rec. 1952. 64. p. 271. pl. Kl f. 26.
Forewings crossed by two sharply defined lines, the ante and postmedian, of which the first does not quite reach the costa; the ground colour is quite smooth without clouding.

ab.caerulescens Lempke. Tijdschr, Ent. (1946)1949.90.p.100. The ground colour of the wings blue-green.

ab.flava Spuler. Schmett. Eur. 1906.2.p. 126.
Forewings bright yellow, with darker yellow costa, inner-margin, and oblique lines; the margins red-yellow.

Pab. xanthophilana Obraztsov. Iris(1942)1943. 56.p. 157. Forewings yellow, differing from the preceding flava Spuler by having no redyellow margins and no darker yellow costa and inner margin.

ab. alba Thierry-Mieg. Ann. Soc. Ent. Belg. 1910. 54. p. 386. (fig. Mill. Iconog. 3. pl. 116.) The name was given to the figure in Milliere's Iconographie 3. pl. 116 f. 2 which shows a female with the forewings completely white, with three pearly lines; the thorax and body also white, antennae reddish.

ab. albidula Strand. Arch. Naturg. (1916)1917.82. A 1.p. 90. Almost wholly white. 9.

This is the only description given by Strand and is vague; it may mean very pale green, or part of the wing white with the rest green. The form was named from Hampson's ab. 3 which has the same description.

ab. dorsilutes Strand. Arch. Maturg. (1916)1917.82.4 1.p. 90.
Torewings without pink on the costal area towards arex, the inner margin yellow.
Taken from Hampson's ab. 2.

ab.flavociliata Obraztsov. Ent. 1.1950.60.5.74. Forewing fringes rellow instead of reddish.

ab.rubrociliata Obrastsov, Ent. 1.1950.60.p.72. 9 form. The entire forewing fringes are completely red-brown, as in the d. The inner margin is also reddish. Pseudoins Hubner.

prasinana Linn. Faun. Suec. 1761. Ed. 2.p. 342.

= prasina Poda. Mus. Graec. 1761.p. 93.pl. 2 fig. 10.

= bicolorana Fuessly. Verz. 1775.p. 41.

= quercana Schiff. Vien Verz. 1775.p. 125.

aberrational forms etc.

Noct. 280.

Sarrothripus Curtis.

revayana Scop. Ann. Syst. Hat. 1772. J.p. 116.

aberrational forms etc.

revayana Scop. typical form -- forevings grey-greenish with fuscous longitudinal lines. This must be an exceptionally rare form.

revayana Schiff. dien Verz. 1775. n. 130. (nom. preoc. 3cop.)

= riuagana Pabricius, Mantissa, Ins. 1787.2.p. 233.

= rivagana Fabricius. Ent. Syst. 1794. 3(2).p. 266.

Schiffermuller says that the insect has many variations, from grey with a red central spot. He was apparently referring to revayana Scop. as a species and not one particular form.

Fabricius refers to Schiffermuller's description in both the references wiven above but the smelling would seem to be printer's errors, both riugena and rivagana might easily be "revayana" with the "i" and "g" wrongly printed. The names cannot be made synonyms of the type form since Scopoli's revayana is grey-greenish, it would be best not to use them.

ab.ramosana Hubner. Samml, Vogel u Schmett. 1793.pl. 75. (Eur. Schmett. Tortr.fig. IO) | = ramulanus Stephens. Ill. Haust. 1834. 4.p. 147.
Forewings brownish-grey with dark fuscous longitudinal branched streaks and discal spot.

ab.grisea Ter Haar. Onze Vlinders.1900.p.65.

= diluteramosanus Schwingenschuss. Zts. /ien.Ent.Ges.1953.38.p.285.

The forewings grey, therefore lighter than the preceding, otherwise similar, with the fuscous branched longitudinal streaks.

Schwingenschuss form had the pale grey ground of dilutana Mon.

ab, cladodes Sheldon. Entom. 1919. 52. p. 101. pl. 1. f. 3. (Barrett. 6. pl. 151. f. 3c.)

Torms paler than the typical ramosana Hbn. Barrett's figure is an extremely light form probably representing the extreme xanthism in Britain.

The form with grey ground, and therefore paler than typical ramosana, cannot be included under this name since Fer Haar has already named it grisea, apparently without Sheldon being aware of it, he does not mention grisea in his long article.

ab. atrata Theldon. Entom, 1919.52.p. 101.pl.1.f.2.

"fuscoramosanus Schwingenschuss. Zts. Wien Ent. Ges. 1953.38.p. 285.

The ground colour darker than in ramosana fon, the black streaks and shading cover almost the whole of the wing. The darkest of the ramosana group, Schwingenschuss form had the ground colour black-gray.

ab. sagittata Sheldon. Entom, 1919. 52. n. 101. pl. 1 f. 4.
Forevings grey, the streak, which runs obliquely to the aper, not finishing before the margin in the usual manner, its outer side strongly toothed or sagitate, is dark fuscous.

ab. strigatanus Schwingenschuss. Its. den Ent. Ges. 1953,38.p. 285.
Forewings with grey ground, the streak deep black and running from base obliquely across the wing to the apex,2 mm. broad in its middle.
Probably the same as the preceding but no mention is made of the sagitate edgeing of the streak on its outer side.



Toct. 280.

ab. combinata Cockayne. Ent. (ec. 1951.63. p. 162. egloriosanus Schwingenschuss. Its. 'ien Ent. Ges. 1953. [8. p. 265. This combines the streaked pattern of revayana with that of biffaction of the streaked pattern of ranosana Fbc. Schwingenschuss form was a combination of the streaked pattern of ranosana Fbc. with that of obscura larren which has transverse lines; the ground colour nalegrey.

ab; stoninus Curtis. Guide Brit. Ins. 1829. p. 20).

= stonanus Stephens. Ill. Haust. 1834. 4. p. 147.

= stonanus Curtis. Brit. Ent. 1840. 2nd. 7d. no. 29.

Forewings brown with the black branched streak of ramosana and a laved fuscous striga across the disc.

Sheldon figures what he thinks this form to be in Entom. 52. pl. 1 f. 5. This shows the ramosana streak, and a vague blackish transverse shade from the middle of the costa to the inner margin, but in addition there is a continuation of the black on the costa right up to the apex, in the form of a second black streak; this apparently is not connected with Curtis form since it is not mentioned in his description. All the specimens I have seen with this fuscous striga across the disc, also have the costal black streak.

ab.russiana Duponchel. Cat. Meth. Lep. Tur. 1841-46. n. 284. fig. Hist. Tat. Lep. France 1034. 9. pl. 255. f. 3b. n. 556. This form was named in Duponchel's Cat. Lep. with reference to his earlier description and coloured figure in Hist. Mat. Lep. Tr. where it was not named. Forewings of a very pale watered green, or white-greenish, with a large number of grey undulations over the entire surface, and a longitudinal black-brown streak from the base to a little beyond the middle of the wing, where it divides into two branches which incline downwards towards the anal angle. The fig. is good.

ab.dilutana Hubner. Sarml. Fur. Schmett. Fortr. 1796. al. 2, f. 6. Forewings ground colour grey, the base narrowly reddish-brown and a central fascia of the same colour, the subterminal line indistinctly fuscous.

ab.fusculana Schmid. Corresp.blatt Lool. lineral. Ver. Legensb. 1885. 39. 1. 75. The chief character of the form is the black, short, oblique streak from the base of the forewing to a point about one thirl along the inner margin. The form was originally described as similar to the preceding dilutana with the addition of the black basal streak, but it occurs in other groups as well. This form is figured in 'ood's Ind. Int. fig. 1942, under the name labramianus.

ab. obsoleta Sheldon. Entom, 1919. 52. n. 105. pl. 1. f. o. Similar to dilutana Hbn., except that it is without the dark base to the forewings and the dark transverse bands are not so well developed.

ab.lathamiana Swederus. K. Vet. Acad. Tya Handl. 1787. 8.p. 276.
Forevings pale red-brown (testaceis), the base, and outer margin, from the anex, showing a row of black snots; a ferruginous fascia in the melian area.
To mention is made of a central black snot

ab. aurana Richardson. Ent. Rec. 1952, 64. p. 273. pl. (1.f. 12. Resembling ab. fusculana Schmid which show a short oblique basal streak, but differs markedly by its very pronounced orange-brown colouring, only a faint trace of the normal purple remains in the post-discal area.

Noct. 280.

ab. ilicana Fabricius. Spec. Ins. 1781.2.p. 283.

= punctana Hubner. Samml. Eur. Schmett. Tortr. 1796.pl. 2.f.).

Forewings dark grey with a greenish tint; two fuscous spots in the antemedian area, a single black spot in the central area and two or three fuscous spots in the marginal area.

Hubner's figure of punctana agrees very well with this description. The form would appear to be very similar to the preceding lathumiana except in colour which is darker in this form (fusco-cinerals).

ab. notata Sheldon. Entom. 1919.52.p. 105.pl. 1.f. 7. Similar in all respects to the preceding ilicana Fabr., except that the colour of the forewings is much lighter in tint, i.e. a light silvery, ashy-grey.

ab.nigripunctata Sheldon. Entom. 1919. 52, p. 105, p. 1.1.f. 8. Ground colour of the forewings reddish-brown; the discal spot. which is black, shows prominently. There are waved slate-coloured lines crossing on each side of the discal spot.

ab. rufescens Sheldon. Entom. 1919. 52.p. 105.pl. 1.f. 9. Similar in pattern and colour to the preceding nigripunctata, except that the discal spot, prominent and large in nigripunctata, is either missing, or very small and indistinct, on the reddish-brown ground.

ab. brunnescens Sheldon. Entom. 1919. 52. p. 105. pl. 1. f. 10. Forewings, thorax, etc., uniform dull brown, with indistinct fuscous transverse lines; the dark central spot is only indicated by a few red-brown scales.

ab. bifasciana Donovan. Mat. Hist. Brit. Ins. 1801. 10. n. 86. pl. 357. f. 3.
Forewings tostaceous, with two whitish bands and four distinct undulated streaks and spots of black.
Apparently a rare form.

ab. afzeliana Swederus. K. Vet. Acad. Tya Handl. 1787. 8. p. 276. Forewings greyish with the base blackish and a large somewhat triangular blotch in the centre of the costal margin.

ab.variegata Sheldon. Entom. 1919. 52.p. 123.pl. 1.f. 11.
Similar to the preceding but the ground colour testaceous-brown instead of grey the light areas also more blotched with dark fuscous.

ab.adusta Sheldon. Entom. 1919. 52. p. 123. pl. 1. f. 12.
Similar to the preceding variegata but with the ground colour much darker, of a dark dull brownish fuscous, and with the costal blotch and markings showing less distinctly owing to the darker ground colour.

ab. glaucana Lampa. Ent. Tidskr. 1885. 6.p. 31. Ground colour of the forewings bluish-grey white, with hardly any definite markings; on the costal margin a large, nearly triangular, dark grey, or brown, blotch apparently very similar to afzeliana but without the dark basal blotch.

ab. canescens Sheldon. Entom. 1919. 52. p. 124. pl. 1. f. 13.
Forewings hoary greyish-white, with dark grey cloudings and blotches, and three waved transverse fuscous lines; the costa with large triangular dark grey blotch in the centre, which stretches half way down the wings.

ab.lichenodes Sheldon. Entom. 1919. 52.p. 124.pl.l.f. 14. Similar to the preceding but with a row of prominent dark fuscous spots on either side of the central area.

ab. fasciata Sheldon. Entom. 1919. 52.p. 125.pl. 1.f. 15,
Fore ings hoary greyish-white as in the last two forms but the costal triangle extending as a fascia across the whole width of the wings; the basal area of the same tint.
The figure shows the costal triangle of a much deriver a door than the rest of

The figure shows the costal triangle of a much darker colour than the rest of the fascia, the basal blotch is also very light.

ab.depicta Sheldon. Entom.1919.52, p. 125, pl.1.f.16. Similar to the preceding with a dark central fascia, but in addition there are two rows of dark fuscous spots, one on each side of the fascia.

ab.feusteli Osthelder. Schmett. Sudbayern. 1932. p. 542. pl. 21. f. 45. Horewings with brown ground colour, with one, sometimes two, black spots in the cell; the costal triangle present as in glaucana Lamba.

ab. undulana Hubner. Samml. Eur. Schnett. Fortr. 1796. pl. 2.f. 7. Forewings fuscous, with a number of darker fuscous, fine, waved transverse lines; the discal spot reddish-brown. There is no costal triangular blotch.

ab.albimaculata Sheldon. Intom, 1919.52.p. 126.pl.1.fl7. Similar to the preceding undulana but the discal spot light grey instead of reddish-brown; the ground colour lighter than in undulana thus showing up the dark transverse lines and appearing more variegated.

ab. plumbea Sheldon. Entom. 1919.52.p. 126.pl.1.f.18.
Forewings with the ground colour light plumbeous, with the usual darker transverse lines faintly indicated.

ab, melanosticta Sheldon. Entom. 1919. 52.p. 126.pl.l.f.19. Similar to the preceding but with a large and prominent central black spot on the forewings.

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ab. obscura warren. Seitz. 1913. 3. p. 490. pl. 53 row c.

Forewings clive-brown, the markings as in degenerana Hom., i. e. basal and outer areas mottled and lined with blackish, the central area clearer.

We have the type in the R.C.K. coll., the figure in Seitz is reasonably good.

ab. nigricans sheldon. Intom. 1919. 52.p. 126.pl. 1.f. 20.

= unicolor Sthelder. Schmett. Sudbayern. 1952.p. 5-2.pl. 21.f. 46.

Torewings dark fuscous, the usual markings and transverse lines very obscure, having the appearance of a dull fuscous, almost black, insect.

Osthelder's unicolor was almost completely unicolorous blackish-grev.

ab.conjuncta Cockayne. Ent. (ec. 1951. 63.p. 162. In the foreving a black bar runs from the median black lot(the remisons) to the antemedian line.

ab.rosea sheldon. Entom. 1919. 52. p. 128. pl. 1. f21.

Forewings ground colour rosy reddish-brown, most prominent in the central transverse fascia; the usual thick transverse wavy lines are very prominent giving the insect a very distinct variegated appearance.

The form is figured in Barrett pl. 251 f. 3f.

ab.virescens Lempke. Entom. 1948. Al.p. 190.
Torevings male greenish with a dark central band.
This is the specimen which Theldon called "ab. degenerana" hich it is superdictially like but now regarded as a distinct species

ab. columbana furner. Ent. Rec. 1925. 57. p. 77.

Forewings of a beautiful uniform love-grey colour, with all the markings so suppressed as to be only suggested at contain angles as being faintly micked out in brownish; the only noticeable one, if at all, is a very ill-demined triangular costal blotch of a suggestion of brown shale; to marking is embasized only being seen when looked for.

Phis form belongs to the affoliana group, see n. 6 of these notes. It was said

to be a race by Turner but amparently occurred with other forms, so is an ab.

fraxini Linn. Syst. Wat. M. 10.1758.p. 512.

aberrational forms etc.

fraxini Linn. typical form --- forewings ash-grey with cloudy markings, the hindrings black with blue fascia.

ab.moerens Fuchs. Jahrb. Mass. Ver. Nat. 1889. 42. p. 210. Forewings strongly darkened to blackish-grey, with a light spot in the centre, beneath the reniform.

ab. gaudens Staudinger. Cat. Ed. 3.1901. p. 447. Forewings much paler, white-grey.

ab.contigua Schultz. Ent. 7.1906.20.p.86.

= longimaculata Closs. Int.Ent. 7.1918.11.p.195.

The light spot in the centre of the forewings, just below the remiform, is much lengthened outwardly so that it reaches the doubled tooth-line(the postmedian). Particularly striking are examples with the wings strongly dark dusted, then this longitudinal streak stands out especially distinct.

ab.atra Spuler. Schmett.Eur.1908.1.p.367. Forewings and thorax totally blackened. This apparently is much darker than moerens Fuchs, since Spuler also gives moeren with the description strongly darkened by black dusting.

ab.argillacea Vincent. Bull. Soc. Ent. France. 1910. p. 316.
Forewings with the two transverse lines of a beautiful straw-yellow, edged with black on each side, the spot below the reniform also straw-yellow.

ab. coerulescens Closs. Int. Ent. 1.1918.12.p. 34. The forevings strongly blue-suffused. Closs says this appears to be a transition to ab. moerens Fuchs.

ab.apunctaleuca Braun. Lamb. 1935. 53. p. 22. pl. 2. f. 2. On the forewings the whitish spot, usually seen just below the remiform, is completely absent.

ab. suffusa Chalmers-Hunt. Entom. 1961. 94.p. 282. [ig. Pr. 3. Lond. Soc. 19-9-50.pl. 3) On the forewing all the markings are suffused and in listinct. Hindwing normal. The white spot below the remiform is present.

ab. nana hukowsky. Polia Jool, Wylro Biol. .7.p. 230.

ab.maculata Kusnezow. Rev.Russe Ent.1901.1.p.130.fig.r.229 f.8. Hindwing showing a distinct blue patch in the basal half of the ring where, in C.nupta, the red colouration begins. Forewings white-grey, less marked. This area of blue scaling is small and the form is a transition to the ab. reversa Fischer which shows much more in the basal area.

ab. coeruleo-maculata Closs. Int. Ent. Z. 1918. 12. p. 35. The hindwings are the same as in the preceding, with a blue patch in the basal field, but the forewings are as in ab. moerens Fuchs, dark dusted.

ab reversa Fischer. Ent. Z. 1943. 56. p. 236. (fig. Mitt. Schweiz Ent. 19. pl. 2. f. -) An extreme form of coeruleo-maculata Closs in which a large part of the usual black basal field is blue, to whitish-blue, leaving a black transverse median band in between it and the normal blue transverse band, much as in C. nunta. The black crescent of the underside shows in the blue area of the underside.

ab. extrema Meyer. Its, /ien Ent. Gas. 1952. 37.p. 7.pl. 2.f. 5.

There seems little or no description in the long mixed-up article, Mayor refers to his figure which is a good one, it seems best to describe the form from it. The hindwings are almost entirely blue in the basal field, leaving a rather narrow black transverse line between this basal blue, and the blue of the normal parameters band, somewhat more extreme than in the preceding reversa Fischer. The forewings are also very aberrant, the black markings being much increased and fused into large dark areas as far as the postmedian line, which is followed by a prominent whitish transverse band, standing out prominently because it is followed by a dark transverse shade. The form was obtained by temperature experiment.

ab. sternecki Hirschke, Jahres-Ber. Tien Ent. Ver (1910) 1911.21.p. 94. The blue band on the upperside of the hindwings more than loubled in breadth. If the normal large black basal area there only remains a small round patch.

ab.latefasciata 'arnecke. Int. Ent. 2.1919, 13, p. 25.
The blue band on the hindwing is about 2 mm. broader than in normal specimens.
Described as a local form from Amurland but our specimens in the Rothschild coll show that it is merely an aberration. The form is transitional to the preceding.

ab.angustata 3chultz. Ent. 1.1906.20. p. 86. The blue transverse band of the upperside of the hindwings, strikingly narrowed.

Noct. 282. p.1.

Catocala Schrank.

nunta Linn. Syst. Wat. 1767. Ed. Kll. p. 841.

aberrational forms etc.

nupta Linn. typical form -- forewings greyish with cloudy undulations, hindwings, red with two black bands.

ab.concubina Borkhausen. Eur. Schmett. 1792. 4.p. 21. (fig. Sepp. 1.pt. 4.pl. 7.f. 7.) The middle band of the hindwings is continued broadly to the hind margin, not broken, as is usual, just before it and then carried on in the form of a streak. The form was named from the figure in Sepp and Borkhausen says the hindwings are of a brighter red than in typical nupta. Sepp's figure shows the hindwings of a somewhat deeper red which may have been merely the artist's impression. The main character is the black middle band which travels from the costa to the hind-margin in an unbroken sweep, passing straight through the black streak usually seen just before the margin.

ab.mutilata Schultz. Ent. 1.1906.20.p.94.
The black transverse band of the hindwing shortened. This is only present at the costa and as far as the place where it is normally angled.

ab. coerulescens Cockerell. Entom. 1889.22.p.127. (see p.51.)
There seems to be some doubt about this form although the description is quite clear and concise. Cockerell refers to the Meeting of the 3. Lond. Nat. Hist. Soc. where Mr. White exhibited a coloured drawing of nupta in which the hindwings were blue, and names this form coerulescens. Tutt states that Mr. Veir remarked at the Meeting that the colour was the same as in C. fraxini. In spite of this, futt on p.131 of vol. 4. Brit. Noct., says that the form with "pale brown" hindwings, shot with purple, later described by Frohawk as of a "very delicate warm brown with a purple glow", is the same as coerulescens. I cannot reconcile the colour of fraxini hindwings with any sort of brown. This brown form is ab. brunnescens Waren

ab. brunnescens (arren. Seitz.1913.3.p.305.pl.55 row b. Hindwings dark olive-brown.

We have Warren's type which is not dark olive-brown, it agrees more with the specimen mentioned by Frohawk (above) which was of a delicate warm brown with a purple glow. Our series of the form ,12 specimens, show various degrees of brown, some very dark purple -brown to the palest, which is Warren's type. Wone of these could be called blue in any sense of the word so I do not agree with Lempke's remark that "there can be no doubt that this form is the same as ab. coerulescens Cockerell."

ab. guiartii Lambillion. Rev. Mens, Ent, Soc. Mam. 1905. 5.p. 2. The red of the hindwings is replaced by a striking bluish suffusion. This may or may not be the same as coerulescens Cockerell, it can hardly be brunnescens Warren.

•

ab. nigra Lempke. Tijdschr. Ent. (1946) 1949. 90. p. 104.
Hindwings unicolorous black, the red colour still feebly percentible.

ab. sanguinea Lempke. Tijdschr. Int. (1946) 1949, 90. p. 104. Hindwings of a beautiful blood-red.

ab, xanthophaea Schawerda. Its. Ost. Ent. Ver. 1925. 10. p. 47. Hindwings not red, but pale brown-yellow.

ab.flava Schultz. Ent. 1.1906.20.p.86. 287.
The red of the hindwings is completely replaced by yellow.

ab. salmonea Cockayne. Ent. Rec. 1946. 58. p. 75. The red of the hindwings replaced by pale to medium slamon-pink.

ab.languescens Jarren. Seitz.1913.3.p. 305.pl.55 f.row A. Hindwing yellowish-white with a faint pink flush.

ab.rubridens farren, Jeitz.1913.3.p.305.pl.55.row a.

The red ground colour of the hindwing running out along veins 2 % 1 in the shape of sharp wedge-shaped teeth, almost interrupting the black median band, which is swollen between them into a large horse-shoe shaped blotch.

The description is bad but the figure good. The Type is in the Tring Museum and shows the red ground extended or protruding well into the black transverse median band, thus forming a sharp tooth which almost cuts the band. The second tooth mentioned by Warren is the normal one near the anal angle, and the "large horse-shoe shaped blotch" is also normal. The effect of the tooth is to give the band a very different line of direction, although this is a false impression.

ab. alterata Tarren. Seitz. 1913. 3. p. 305. The black bands of the hindwings altered to groy.

ab.confusa Oberthur. Lep. Comp. 1912. 6. p. 336. pl. 131 f. 1158.
There appears to be no description but the figure is excellent. This shows the markings of the fore ing blurred and suffused with dark wev. exactially the outer third of the wing. The hindwings are strikingly aberrant, the outer edge of the median black band being dentate with many fine tooth-like projections, and the inner edge of the marginal black band similar, but the tooth-like projections much longer and sharper. This gives the effect of the red ground sending out red rays into the black bands.

ab.fida Schultz. Ent. 1.1909.22.p.169.

On the forewing, between the margin and the sharply-toothed cavy line, there is a distinct, broad, white, fairly well-defined, broken toothed line.

ab.nigrescens Hannemann. Int. Ent. 1.1917, 11.p. 105.
Forewings dark black-grey, with strong dark markings, the light parts absent.

ab. nigra Cockayne. (nom. preoc. Lempke.) Ent. Rec. 1951. 63. p. 162. pl. 5 f. 4. Foreving and thorax almost black, on the forevings traces of two light marks near the reniform, and of the pale subterminal line. Hindwing normal.

ab. yariogata Lempke. Tijdschr. Ent. (1946) 1949. 70. p. 103. Forewings grey, strongly spotted with yellow, the markings dark and sharely contrasting.

ab, dilutior Schultz. Ent. 3.1909.22.p.169. Forewings with the ground colour strongly lightened, eithor brownish-yellow ith the normal markings standing out somewhat darker in yellow-brown, or whitish-grey with hardly discernible yellowish mixture.

ab. grisescens Hannemann. Int. Ent. 2.1917.11.p.105. Forewings unicolorous brownish-grey, the light and lark markings almost invisible.

ab. quasiinterrupta Schnaider. Polsk. Pismo Ent. . 19.0.254.

ab. victoria /oskressensky. Trav. Mus. Jool. Kieff. 3.p. 146.

4.

Moct. 283. p.1.

Catocala Schrank.

sponsa Linn. Syst. Wat. 1767. M. Gl. p. 841.

aberrational forms etc.

ab.desponsa Schultz. Ent. 1.1906.20.p.94-95. Examples in which the crimson-red of the hindwing is completely changed to yellow, also those in which it is partly changed.

ab.postlactea Cockayne. Ent. dec. 1951. 63.p. 162.
Hindwings with the usual purplish-red replaced by white with a creamy tint in the basal area; the underside cream coloured. Forewings, thorax and abdomen lack the brown tone of the typical form.

ab.rejecta Fischer. Entomographie de la Russia. 1820-22. 1. n. 197. pl. 5. f. 2. The original description says the hindwings are brownish instead of red, with a narrow undulated rosy band. The figure is good and shows this rosy band on the outer side of the median black transverse band which is quite perceptible on the brown ground, as is also the marginal black band. Fost authors copy Guenee and Futt in describing the hindwings as "entirely black which is a gross exaggeration. arren's figure in Jeitz on the other hand shows practically no darkening of the red ground.

ab.pomerana Diesterweg. Deutsch. Ent. 1.1921. n. 271.
Head, thorax, abdomen, fore and hindwing black. The reniform weakly grey-marked and the paler spot below it absent, the subterminal similarly marked in grey.

ab.rosea Lempke. Tijdschr. Ent. (1946) 1949.90.p.101. Ground colour of the hindwings rosy-red.

ab. demaculata Heinrich. Deutsch. Ent. 1. (1916) 1917. p. 543. On the forewings the stigmata are not white, but covered over with the ground colour.

ab.fasciata Spuler. Schmett, Eur. 1907.1.p. 316.

= variegata Lempke. Tijdschr. Int. (1946)1949.90.p.101.

Forewings variegated, the middle field between the two transverse lines strongly white-grey dusted.

Lempke's variegata had the central area of the forewings paler, greyish.

ab.florida Schultz. Ent. 4.1909.22.p.169. Very similar to the preceding but apparently paler over the whole of the forewings. The basal area is pale-brown, far lighter than the usual colour, whilst the middle over its whole surface, from costa to inner margin, is grey—thite powdered. The outer part of the marginal area is also grey—thite, whilst the inner part, margined by the black dentate transverse line, is pale brown like the basal area.

ab.grisea (arren. Seitz.1913.3.p.303.nl.54 f.row c. Forewings entirel adark grey, grizzled with pale grey, without any brown or fuscous streaks.

p.2.

ab.fortis Schawerda. Verh. zool. -bot. Ges. Vien. (1921) 1922.71.p.158. Forewings strikingly black-brown in the basal, middle and outer areas, only a small area around the stigmata, and these themselves, are pale, the subterminal line pale and visible on the black-brown.

ab. obscura Oberthur, Lep. Comp. 1909. 3.pl. 12.f. 16.p. 405. = obscura Schawerda. (nom.preoc. Oberth. 1909.) Verh. z.-b. Ges. ien. 1922. 71.p. 158. specimens with completely dark forewings, without white or white-gray, Described as an ab. of the Algirian subsp.laeta Ob. Schawerda's obscura was from S. Europe.

ab. atra Spuler, Schmett. Eur. 1908. 1.p. 367. Forewings completely blackened. This may be the same as the preceding but "blackened" presumably means black and not black-brown.

ab, flavicollis Kesenheimer, Int. 3.1941.55.p.72. With beautiful ochre-yellow collar, standing out sharnly from the mouse-grey thorax as it does in many Cucullia species.

Noct. 284. p. 1.

Catocala Schrank.

promissa Schiff. Vien Verz.1775.p.90.

= promissa Hubner. Samml. Eur. Schwett. 1809-13.pl.71.f. 334

= mmeste Hubner. Samml. Eur. Schmott. 1809-13.pl. 123.f. 569.

= conjuncta Humph. & Westw. (noc. Isp.) Brit. Hoths. 1843. 1. n. 250

aberrational forms etc.

promissa Schiff. (Hubner). typical form -- from Hubner's figure the fore ings are grey mottled with brown. Hindwings crimson, the median transverse black band not reaching the anal margin. Hubner's mneste is figured with this band also not reaching the anal margin, so it should not be treated as an aberration on this point, as it is in the new South's Noths of Brit. Is. The forewings in mneste are less variegated with whitish but it would seem best to treat it as a synonym of the type form. Hubner's third figure, this time called promissa(as his first figure is) shows the transverse band of the hindwing travelling right up to the anal margin,

ab. grisescens Lempke. Tijdschr. Int. (1946) 1949.90.p.102. The ground colour of the forewings grey without brown, the pattern sharp.

ab.variegata Lempke. Tijaschr. Ent. (1946) 1949. 90.p. 102. The central area of the forewings pale grey, shamly contrasting with the dark brownish basal and marginal area.

ab. rosea Tutt. Brit. Noct. 1892. 4.p. 55. The abdomen entirely of a rose colour.

ab.contigua Lempke, Tijdschr. Ent. (1946) 1949. 90.p. 103 The pale spot, under the remiform stigma, touches the outer line.

ab. ochracea Oberthur. Bull. Soc. Ent. France. 1907.p. 346. Hindwings of a clear yellow-ochreous.

ab. obsoleta Schultz. Ent. 2.1906.20.p.95. Hindwing with the black median bands not sharply bordered as in the type but flowing into the red ground colour. It has a similar appearance to C. shonsa ab. rejecta Fischer.

ab, sponsoides Closs, Int. Ent. 7, 1918, 12, p. 34. The median band of the hindwings angulated as in sponsa and extended to the hind-margin. Possibly a hybrid between snonsa and promissa. To have specimens in which the band reaches the hind-margin in a very definite manner, which gives the band a more angulated appearance,

Moet. 285. p.1. Euclidimera Hamoson.

mi Clerck. Tcones Ins. Rer. 1759.1.91.9.f.5. = litterata Cyrilli. Ent. Nap. 1787-92.1.p.2.pl.1.f.9.

aberrational forms atc.

mi Clerck. typical form --- the ground colour white.

ab. ochracea Tutt. Brit. Noct. 1892. 4.p. 58.
Both fore and hindwings with the pale parts ochreous, instead of white. The common form in England.

ab. illuminata Warren. Seitz. 1913. 3.p. 343. pl. 62 row h-i. The dark areas restricted by the amplification of the pale spaces.

ab.aurantiaca Warren. Seitz.1913.3.p.343. The ground colour orange-yellow.

ab. suffusa Warren. Seitz.1913.3.p. 343.pl. 62 row i. The white spaces almost crowded out and both wings are nearly black.

ab. obscura Lempke. Tijdschr. Ant. (1946) 1949.90.p. 108
Forewings unicolorously dark grey-brown with narrow pale circumscription of the markings of the central area, and narrow or obsolute subterminal line; hindwings normal. The latter character distinguishes the form from ab. suffusa Jarren.

ab. extrema Bang-Haas. Iris. .1912.26. n. 162.

An extreme form of the white-ground-coloured ab. litterata, with the fore and hind wings showing strong extension of the white coloration; the black and the white are about even, giving a quite different impression than the darker European specimens; in particular the white transverse band in the middle of the hindring is often really broad.

Described from Amur and is possibly a race but may well beaut as an aberration.

ab. costimacula Cockayne. Ent. Rec. 1951. 63.p. 162.pl. 5 f.ll.
On the forewing the basal area is paler than usual; there is a dark mark on the costa, which just encloses the remiform and orbicula, which is curved on the distal side, and has a small hook-shaped projection at the proximal end pointing to the inner margin; the subterminal and marginal lines are normal, the rest of the ring is very pale cream and contrasts strongly with the dark markings. In the hindwing the basal area is dark grey-brown, without the usual light areas of ground colour: a broad band of light ground separates it from the black band running parallel with the margin, the black marginal band is normal.

ab. explanata Rebel. Verh. zool.-bot. Ges. Tien. (1908) 1909.58.p. (271). Forewings at the base white-grey, becoming paler and paler towards the margin, and beyond the subterminal almost pure white. The markings less developed towards the margin, the remiform is white-grey instead of black and the hookshaped costal blotch which follows it is strongly reduced to barely half its normal width, the subterminal line only marked by blackish-grey shading. Hindwings similar, the black markings remain in the basal area but in the marginal area there are radiating streaks of blackish on the veins.



Moct. 285. mi Clerck, continued.

p.2.

ah. insulata Klemensiewicz. Spraw. Kom. Fizyogr. Krakow. 1912. 46. p. 16. The lobe of the postmedian blotch of the forewing pointing towards the anal angle, is widely interrupted by white. This description is by Draudt in Seitz 3. Suppl., I have not seen the original.

ab. vitiosa Mehrli.

The forewings show a reduced middle area. The outer transverse stripe extends to the inner margin in an "S" shape, so that it forms only one lobe at its lower end, emitting white ray-like extensions towards the margin. This description is by Draudt in Seitz 3 Sumpl., he gives no reference. It presumably means that the lobe of the outer costal blotch is cut off so that its outer edge forms a line from the costa to the inner margin in the shape of an "S", the lower part of this "S' is the lobe of the inner transverse blotch.

ab. cuncleata Lenzen. Ent. 2.1944. .p. 26.

glyphica Linn.

aberrational forms etc.

glyphica Linn. typical form -- forewings fuscous with blackish markings, hindwings yellow with blackish fascia.

The latin description may well apply to mi and not glyphica, since Linnaeus mentions "maculis hieroglyphicis nigris", there are no hieroglyphics on the forewings of glyphica.

ab.marginata Souler. Schmett, Eur. 1907. 1.p. 307.

On the forewings the marginal area, with the exception of the dark costal spot, is lightened to whitish ochreous as far as the quite narrow outer band, which is contrastingly dark. Hindwings vary in a similar way.

ab. suffusa Spuler. Schmett. Eur. 1907. 1.p. 307.

On the forewings the marginal area, where it is usually paler, is unicolorously dark brown,

ab.costovata Foltin. Its. Tien Hit. Ver. 1942. 27. p. 36.

The two transverse stripes of the forewings are united at the inner margin.

ab. angustelineata Lempke. Tijlschr. Ent. (1946) 1949.90.p.110.

The broad dark bands along the inner and outer lines of the forewing, fail.

ab, meridionalis Strand. Myt. Mag. f. Naturv. 1901. 39. p. 55.

The dark costal spot of the forewings tapers to a point at its lower end and is therefore triangular.

Strand expressed the opinion that this form was possibly the Central-European subspecies but Lemoke says this is not so, and none of our European series show the character at all. I agree with Lemoke, that it is a rare form.

ab. tristicula Schultz. Soc. Ent. 1908.22, p. 186.

Forewings almost unicolorous black-brown, hindwings unicolorous black-brown.

ab. aurantiaca Schawerda. Zts. Ost. Ent. Ver. 1928. 13. b. 105.

Hindwings orange. Forewings more contrasted in grey-violet and deep chocolatebrown.

ab. obsoleta Strand. Myt Mag.f. Waturv. 1901. 39.p. 55.

The two transverse bands on the underside of both fore and hindwings completely absent, or extremely weak.

ab.lata Strand. Nyt Mag.f. Naturv. 1901. 39. p. 55.

On the underside the innermost transverse line is indistinct whilst the outer one is strikingly dark and broad, at least on the hindwings.

Noct. 287.

Minucia Moore.

lunaris Schiff, Wien Verz, 1775.p. 94. = meretrix Fabr. Spec. Ins. 1781.2.p. 507.

= augur Esper. Eur. Schnett. 1786, 4. (1).p. 57.51.87.1.4 5 88.1.1.

aberrational forms etc.

ab. ochrea Krombach. Int. Ent. 1.1019.12.p. 186. Ochre-yellow suffused with weak markings.

ab, rufa Oberthur. Etudes Ent. 1884. 9. p. 39. pl. 3. f. 11.
No description, The coloured figure shows the wings strongly rufous or red-brown.

ab, murina Oberthur. Trudes Ent. 1884. 9. n. 39. pl. 3. f. 12. So description. The coloured figure shows the wings mouse -grey,

ab.maura Oberth. Etud a. Ent. 1884. 9.p. 39.pl. 3.f. 13.

To description, The coloured figure shows the wings unicolorously black-brown, the transverse lines faintly apparent in dark gray.

ab. obscura Favre. Faun. du Valais. 1899. n. 220. Extremely like the preceding but since the markings are said to be nomed and therefore yellowish, not dark gray as in oberthur's Figure of maura, it can stand if desired. The wings are blackish-brown, the markings armul.

ab. brunnea Lempke. Fijdschr. Ent. (1946) 1949.90.0.107. Forewings unicolorously brownish with distinct markings. Presumably only in the Q.

ab. brunneogrisea Lemoke. Fijdschr. Ent. (1946) 1949. 90.p. 107. Ground colour of the fore-ings dark grey-brown with distinct markings. Probably only in the female.

ab. albilinea Tagner. Int. Ent. 2. 1919. 13. p. 152. pl. 1. f. 4. (plate not in our cony) all wings unicolorous dark brown, the forowings with two sharp fine white transverse lines; all the other markings, also the stignate, completely obliterated the subterminal marked by whitish clouding.

ab. clara Lempke. Tijdschr. Ent. (1946) 1949.90.p. 107. The marginal area much paler than the typical form, because the dark tint is restricted to a feeble shadowing of the outer line and the submarginal line.

ab. olivescens Parren. Beitz, 1913. S.p. 327. pl. 60 row e. The whole wing tinged with greenish, and the abdomen is globby. The have the Type at Tring, the forewings are pale grey with the clightest tinge of green; the body is not glossy, only greasy.

ab.cingulata Lempke. Tijischr. Ent. (1946) 1949. 90. n. 108. The dark centre of the remiform fails, so that only the circumscription require. This form seems as common as the dark-centred remiform which Lempke evidently assumes to be the typical form.

ab. clausa Lempke. Fijdschr. Ent. (1946) 1949. 90. -. 108. (description vol. 82. g. 19/./ The first and second transverse lines join at the inner margin.

ab.radiata Cockayne. Ent. Rec. 1953. 65.p. 81.pl. X1. 1.5.

From the subterminal line to the row of black dots near the margin, there is a pale line along each of the nervures (seven in all).

We have the Type in the R.C.K. collection at Tring, and these rays do not seart on the subterminal, but half-way between the postmedian and the subterminal. The hindwings show traces of the same character.

ab.privata Dannehl. Ent. Z. 1926. 40. p. 370. The orbicular completely absent.

ab.cantiana Chalmers-Hunt. Entom. 1961. 94. p. 285. pl. 7. f. j.
On the forewing the area external to the outer line is reddish-brown, thus contrasting strongly with the basal and median areas, which are grayish-white.
The figure shows the subterminal line distinct; it is therefore not the same as the following ab. bitincta Dannehl.

ab. bitincta Dannehl. Ent. Z. 1925. 40.p. 371. On the forewing the outer area contrasts with the dull unicolorous pale millionand basal areas, by being unicolorously darkened through the complete absence of the outer wavy transverse line.

ab. centralis Chalmers-Hunt. Entom. 1961. 94. p. 283. pl. 7. f. 1). On the forewing the normal dark brow colouring, distal to the postuedian, extends inwards to include the whole of the median area. The figure shows the basal area and the outer marginal area of the normal pale coloration, the median area remarkably dark and contrasting.

ab. inoperta Loritz. Its. lien. Ent. des. (1946)1947.57. p. 95. fig. p. 94. The forewing is covered with ivory scales, the brown nervures standing out well from this light ground. The palps, hair on head, thorax and abdomen, as well as the legs, are also ivory coloured. Hindwing considerably lighter in the contral area, without any trace of dark scales in its inner part. An "albinism" of the forewing



Colocasia Ochs.

coryli Linn. 17st. at. 17.8. 11. (. -. 503.

aberrational forms etc.

ab. avellanae Huene. Berl. Int. 7.1901. 45. p. 10%. Porevings unicolorous grey from the base to the outer megin, the Aurkin of normal and distinct but the nut-brown band of the basal half fails completely.

ab. alba Derenne, Lamb. 1926. 26. p. 42. The brown band of the forewing only exists at the base, the area normally occupied by the brown band is white-grey , leaving the sinuous lines bor ering it, and also the orbicular, visible in black; the terminal area is fact gray, Head and abdomen grey-thitish. A albinistic form.

ab. Celeta dockayne. But. ec. 1951.69.p. 169.51.5.f. 12. The chole of the median area of the foresting is cream coloured, without may markings except a thin dark line round the orbicular and a dark lot inside it, a dark line on the proximal side of the remiform and another inside it; the basal, ante and mostmedian lines are absent; the basal area is light brown and the outer part of the wing is uninomal, pale brownish-grow with the subtermina line slightly darker.

Somewhat similar to the preceding ab, alba Jerenne but the medica area has no sinuous lines bordering it.

ab. mationigra Vorbroit. Schmett. Schmeis, 1911.1.n. 1//. the medium band of the forevings dark black-brown.

ab. melanotica Haverkannf. Jun. Boc, Int. Belg. 1906. 50. n. 158.

= weymeri Mold. Int. Int. 1, 1910.3. -. 4-0. Mig.

= wautersi Dufranc. lev. lens. loc. Int. am. 19-5.45.0. 1.

Complete melanism, thorax, ab onen and rings.

Hold's weameri, from the same locality, Thorriell, Johnson, for also bescribed as "melanistic" -- Of a unicolorous dark brown coloration with only slight markings. The figure is good.

Jufrane's wautersi was described as having the light parts not pearl-grey, but russet or brown-red from the elbowed line to the aringe; the median area is clear or light brown, with the durker markings of the typical form, This is almost certainly one of the graduations in colour of the co. inclanation which varios to a great extent in lepth of colour, a have several brole maple which could be separated from the very dark ones as wontersi, being highten rod-brom especially in the marginal area. It would hovever seem unlestimed to securate and name all these various shades.

The ab, melanotica is very common in the Chiltonna around Aring at the new court time, 1963.

ab. uniformis Turati. Jat. Sic, 1919, Sep. p. 5-.

Uniform brown colour. Of lighter colour there is only one little thice man's showing on the distal side of the remiform which amount at the side of but outer transverse stripe which there envelopes almost the protinnal brother border of the spot itself, continueing sufficiently distinct to flinish ut the inner margin. Standing out also is the little brown circle of the vascular stigma with the little black spot in the centre. It remins one a little of the uniformly coloured subsp.mus Oberthur, but the colour is different being grey in mus.

The description is somewhat puzzling, the form must be near melanotica but will

a white snot on the outer side of the remiform,

fact, 288.

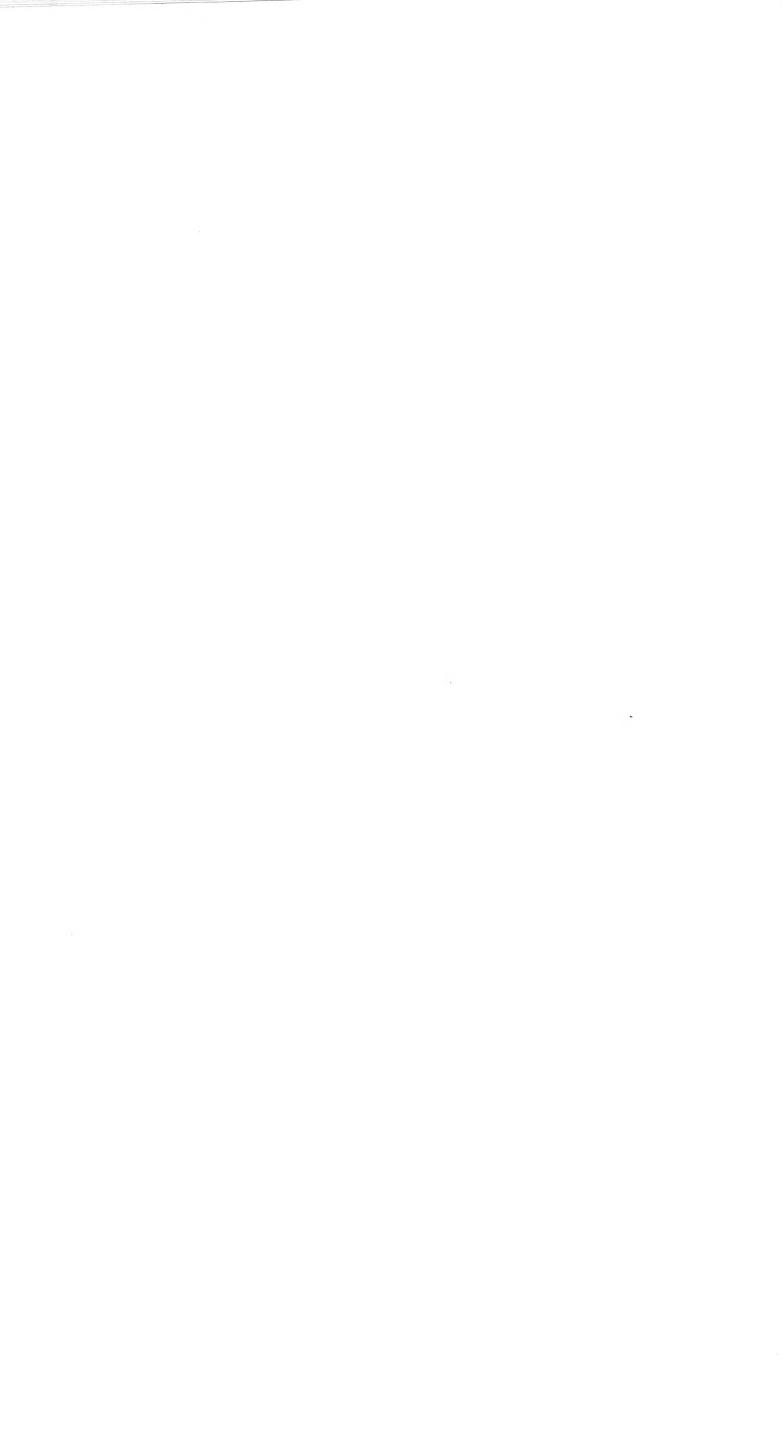
ab. umbrosissima Turati, Jat. Sic. 1919. Sep. n. 63.

Thowing a great intensification of the shady brown median area. Thich assumes the shape of a dark triangle, leaving a little grey at the base and the part proximal to the costa. Its distal side, cutting almost half the wing with a straight line which constitutes the prolongation of the brown edge next to the remiform, goes straight from the costa to finish on the inner margin between the brown spot which ends the submarginal line, and the end of the distal transverse stripe.

Presumably the dark median area is extended beyond the remiform and up to the costa, where it is normally grey. It then goes in a straight line down to the inner margin, also somewhat beyond its normal extent.

ab. betulae Lenz.

The name was given to a cossible ner enecios on the strength of the large being different from ordinary coryli. The large was the dark, almost black form, which occurs along with the type form; the moths not used were little different from coryli. If used, the name is for the largal variation.



Woct.289. p.l.

Polychrisia Hubner.

moneta Pabricius, (antissa 1787.2.0.162.

= flavago Esper. (in error) Eur. Schmett. 1787. 4. 1.11. f.1.

= napelli Vill. Linn. Ent. 1789.2.p. 275.pl. J.f. 21.

= argyritis Esper. Eur. Schmett. 1792. 4. (1). 5.218. hl. 11. f.1.

aberrational forms etc.

ab.margarita /arren. Seitz.1913.3.p.358.pl.65 row i. Cream white with a silvery sheen, without any brown surfusion, the lines more or less obsolete but traceable like the stigmata, in certain lights. Mindrings whitish with brown veins and slightly discoloured towards the termen. Ibino.

ab.esmeralda Oberthur. Etudes Ent. 1880. 5.p. 85.
Forewings white-yellowish giving a very different appearance; the markings however are the same as in typical moneta, except the best estrabased line below the median nervure which, in moneta, is double but, in esmeral la, simple. The form would seem to be racial in Eussia but we have a similar English form.

ab.aurea Lempke. Tijdschr. Ent. (1946) 1949.90.p. 121. Forewings beautifully gold rellow-brown, the dark sprinking or dusting, almost completely absent, the central shade pale brown.

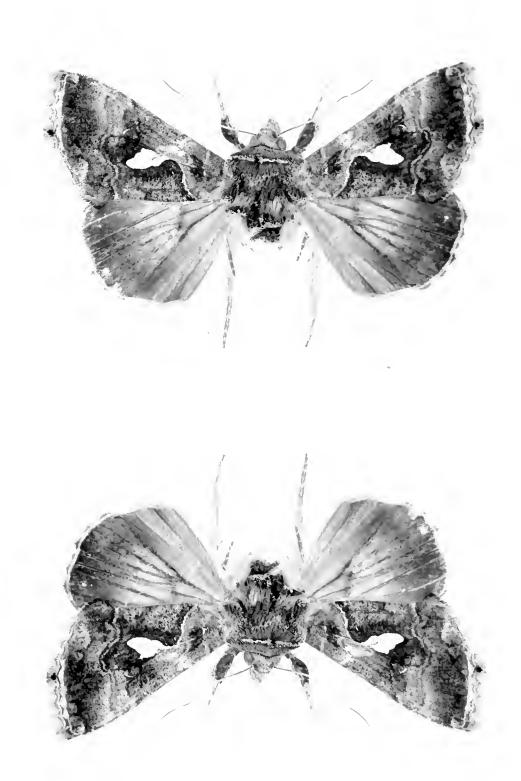
ab.maculata Lemoke. Tijdschr. Ent. (1946) 1949. 70. n. 121. The ground colour of the fore-sings darkened, so that the central shade no longer contrasts; the black nowdering in the submarginal area condensed to black spots between the nervures.

te have the specimens mentioned by Lempke, the black marginal spots are large, striking and wedge-shaped, six to seven in number, they do not appear to be connected with black lusting or powdering which Lempke mentions.

ab. pallescens Lempke. Tijdschr. Int. (1946), 1949. 90. 120. Ground colour of the forevings pale yellou-brown. All examples of the Autumn generation belong to this form but it also occurs in the first generation.

ab. renitangens Lempke. Tijdschr. Ent. (1945) 1949.90.p. 121.
At its upper and lower edge the reniform stigma touches the central shale.
This presumably means the large ear shaped silver spot.

ab.intersecta Huggins. Entom.1952.85.p.185.
The large ear-shaped spot in the centre of the wing is prolonged at the outer corner into a linear marking, which intersects the central dark band and reaches beyond it, towards the costal apex.



chrysitis Linn. Syst. Hat. 1758. 3d. Lon. 513.

aberrational forms etc.

chrysitis Linn. -- typical form -- the metallic bands yellow-copper in tint, and not united in the centre.

ab. juncta Tutt. Brit. Noct. 1892. 4. p. 25.

The two metallic bands of the forewing joined in their centres by a transverse band, instead of being separated throughout their length.

1902.155)

ab.disiuncta Schultz. Ill. Its.f. Ent. 1900.5.p. 349. (fixed by Speiser Barl. Ent.). = disiunctaurea Spuler. Schmett. Eur. 1908.1.p. 366.

The glossy metallic transverse bands completely separated from one another. Shultz does not give any colour but Speiser automatically fixes this in his description as shining gold yellow."

Schultz was wrong in considering the form with the bands united, as the typical, form, his disjuncta was therefore a synonym of the type, except that he stated no colour, Speiser in fixing the colour, separates it from chrysitis which had copper-yellow bands. Spuler named this form with separated gold-yellow band disjunctaurea.

In my opinion it is almost impossible to separate these metallic colours, except the distinctly green form, and it would have been better to make both disjuncta Schultz and disjunctaurea spuler synonyms of the typical chrysitis, Lempke however has made an ab. disjuncta-viroscens so the other "disjuncta" forms are kent scharate here.

ab. disjuncta-virescens Lempke. Tijdschr. Ent. (1946) 1949. 90. p. 11). The bands of the forewing green-yellow and not united with each other.

ab.disjuncta-scintillans Lewoke. Ent. Ber. 1934. 9. p. 33. The bands of the forewing blue-green and not united with each other.

ab.aurea Huene. Berl. Ent. 4.1901. 46.0. 513.

As a separation from the greenish glossy brass forms, the glossy gold specimens can be distinguised by the name aurea, irrespective of the formation of the median grey-brown fascia.

Huene cites one specimen with the metallic bands joined across the middle, others with the bands separated, so the name is intended for all specimens in which the bands are "glossy gold".

ab. scintillans Schultz. Int. Int. 1.1907.1.p. 32.

The metallic bands of the forewings silver-blue instead of the usual golden or brass colour. The bands are united in the middle. The metallic gloss of this form approaches in sparkling to that of the related species P. mosimi. Lempke states that the form is "blue-green" and bases his disjuncta-scintillans on this assumption. It would appear that he misread Schultz description and thought Schultz meant the colour of P. mosimi, whereas it was the "sparkle" or gloss, which in mosimi is intense.

n. 2.

ab. decorata Dannehl. Ent. 1.1933.47.p.20. The metallic bands united as in ab. juncta Tutt, but so increased in the width at the point of junction that the inner marginal patch of brownish ground colour is almost completely absent.

ab. croesus Bryk, Ent. Tidskr, 1923, 44, p. 116. The spot at the end of the cell gilded over, Presumably of the same metallic shade as the bands.

ab. rosea Kaucki. Polsk, Pismo Ent. 1949. 7.p. 185. Dail to be suffused with rose. I have not seen the original description.

ab. virescens Lemoke, lijdschr. Ent. (1946) 1949.90.p. 113. The metallic bands of the forewings green-yellow, and united across the mildle.

ab.parva Schnaider. Polsk. Fismo Ent. . 19.p.254. A form of ab.juncta Tutt, of very small limensions.

ab. splendidior Fernandez. Mem. Soc, Espan. Hist. Hat. 1929. 15. p. 598. fig. 596.



chryson Esper. Hur. Schmett. 1729. 4. (2). p. 446. pl. 141. 2.2. = aurea Foltin. Its. ion Ent. Ver. 194. 27. p. 36.

aberrational forms otc.

chryson Esper, typical form -- the metallic portion of the Corolings julten. Esper calls it "The Gold-Leaf fortuid."

ab. virescens Lampke. Tijdschr. Hnt. (1946) 1949. 90. p. 112. The large spot of the forewings green-yellow.

ab. emporia Dannehl. Ent. 1.1933.47.p.20. (description vol. 40.p.17)
The gold spot almost reaching the costa. Hindwings with the transverse line standing out from the dark marginal band, more strongly curved outwards towards the margin.

Dannehl described this as the autumn brood from Southern Tyrol but it would appear to be an aberration.

ab. coreae Strand. Arch. Maturg. 1917.82. A 2.p. 50. Forewing with the gold patch tinged with green and not extending to the subterminal line.



Plusia Ochs.

bractem Schiff. 'ion Verz, 1775. b. 314. = securic Villiers. Linn. ht. 1789. 2. b. 271. 1. 5. f. 10.

aberrational forms etc.

bractea Schiff. typical form --- purple-brown with golden spot.

ab.argentea Gronemeyer, Unt. 1,1912,25, m, 140.

= argentea-maculata Vorbrodt, Schweiz,1912,1, p, 42,
With distinct silver leaf.
Vorbrodt's argentea-maculata had silver spot instead of goll.

ab.bracteana Strant. Arch. Maturg. (1915) 1917.82... 2.0.50.
Foreving with the metallic stigma only slightly drawn out at its lower and.
Mormally the spot stretches out more than "slightly", but it is a most variable character with many intermediate stages.

ab. hanickae Silbernagel, Acta Soc. Ent. Bohem. 1940. 37. n. 113.

Host. 293.

Plusia Ochs.

fastucae Linn. Syst. Nat. Ed. 10.0.513.

aberrational forms etc.

ab. coalescens Schultz. Ent. 1.1905.19.n.86.

= marisola Krulikowsky. Soc. Ent. 1908.23.p. 11.

= festucella Strand. Arch. Waturg. (1916)1917.88.A 2.p. 48.

= juncta Greer. Hatom, 1920, 55.p. 43. The two silver spots on the forewing are united.

ab.miniana Schultz. Ent. 1905.19.p.87.

= ignita Cockayne. Ent. Rec. 1991. 69.0. 169.
Forewings unicolorous bright vermilion or brick-red, the brown tones absent.
Head, antennae and thorax of a similar colour, absome, particularly on the underside, stronger red than normal, the legs also red of a brighter tint. The silver spots in the median area normal, the other metallic markings often restricted by the light red ground colour.

Cockayne's ignita would seem to be the same bright form. The description saysThe usual brown markings rich red-brown, and the pale ones bright reddish-orange;
the thorax reddish-orange, the abdomen rosy-red at the sides and on the angle on,
the antennae and legs bright reddish-orange. The form is a more brilliant and
fiery-red than any other seem by the author.



Moct.293A.

Plusia Ochs.

gracilis Lempke. Ent. Ber. (Amst.). 1966, 26.p. 69.

aberrational forms, etc.



iota Linn, Syst. ut. 1710. M. 10. . 1.

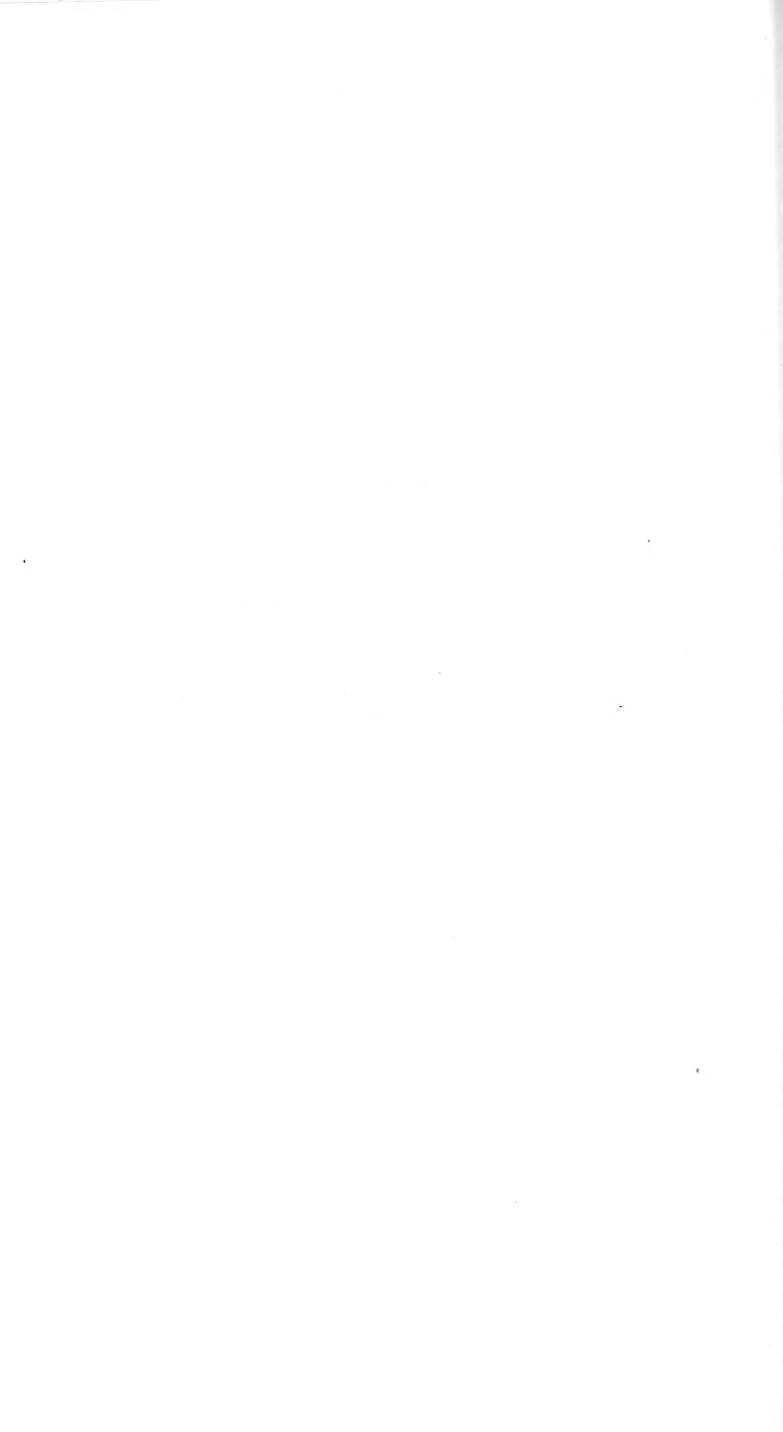
abore tional forms etc.

iota Linn, typical form -- the "Y" much live to a war, on the a "Y", the lower like a tear or a round not.

Lb. inscrimts leads, Thur, Delrastt. 1707. 4 (1). h. 11], hd. 11, t.j. to trues of the usual motallic "Y' 40 hs on Which me ings.

o, the orbadio dis Treibschko, Schools, Hur. 1722. J. (57.). U., = bar Molomacidi II... Dull. Phys. Wh. Low. 1871. U.
The open and loter pures of the rest like mast, on all theory. ... of a series with a single pure.

is, balisio. Diense, the 65, 375, , 177, 6, , 177, end is. In the initial of colors, many value of the color of the first colors.



pulchrina Havorth, Len. Brit, 1800. p. 1. 6. = v-aureum Guenee, Hist. Gt. Ins. Len. 1874. Oct. 2. o. 39.

abermational forms ofc.

pulchrina Harorth, typical form -- the matallic "Y" mark divided into to parts, the upper like a Y, the lower usually in the character and An Allietical mot.

ab, nercontatrin Aurivillius. Nor'. Tjurila 1888+91.p. 181. = juncta Tutt. Brit. Noct. 1892. 4.p. 29. = yosilon Tiesen. Statt. Ent. 1.1901. 61. n. 166. The tro matallic marks of the foreging united to form a Ti, instant of being senarated into an upper "" and a lover spot.

ab.incipiers Schererle. 1. st. Ent. Ver. 1919.14. n. 107. = orbata Dahl. Tht. Tilstr. 1930.51. n. 25%. "I.I. f. %. The lower metallic spot of the formaing is absent. The upper mart, neally were sharel, reduced to just a trace.

Dahl's figure of orbata shows the upper mark as a ware spot, the lower spot completely absent.

ab, garmoides Speyor. Shabb. Mark, 1,1875.66, n,109 floobabl. Tiol A-grey, like many R. garma, not reflue in the typical form.

ab. mullida (amren. Beito, 1919. 9. 1. 5)1. The ground colour is whitish.

an, invoces fan Linselinge, Bris, Bur, Rast, Lyja, Lj., Lj. The ground enlaw gray-brown, without a truer of red or violet.

ab. ghorings. Cockaras, that, i.e., 1951.69.m, 169. (Fig. Enton.99.m.) that, i.e., a the foresting there is a large resign-shared golden patch beginning at the automedian line as a narrow stocak and while sing gradually and become gloss from the reaches the restriction line; there is a golden line along the subsocial, and another along the subjection between glant fitties golden standing one between nervowes 4 and 5 and apother between glant fitties and a golden line along the edge of the subterminal line and as area of limits a call was selected outside it.

ab. Lenulata Gooka we. Ent. Lec. 1951. 65.p. 16. 16. 16. 16. 16. 16. The area between nervures 1 km 15 on the correcting from the intens indicate the postmolian line is almost symmetrically level of scales exceed the real the golden marks, thich remain intact; the product and distall siles of the remineruation golden and there are scattered golden scales along the returnal aspect of the subterminal line. Und raids nowal.



Moct. 296.

Plusia Ochs.

ni Hubner, Samal, Bur, Schmett, 1800-03, pl. 58. . 284,

aberrational forms etc.

ni. Hubner. typical form --- the metallic mark on the Porskings divided into two parts, the upper shaped like a "U", the lower merely a spot, or rep.

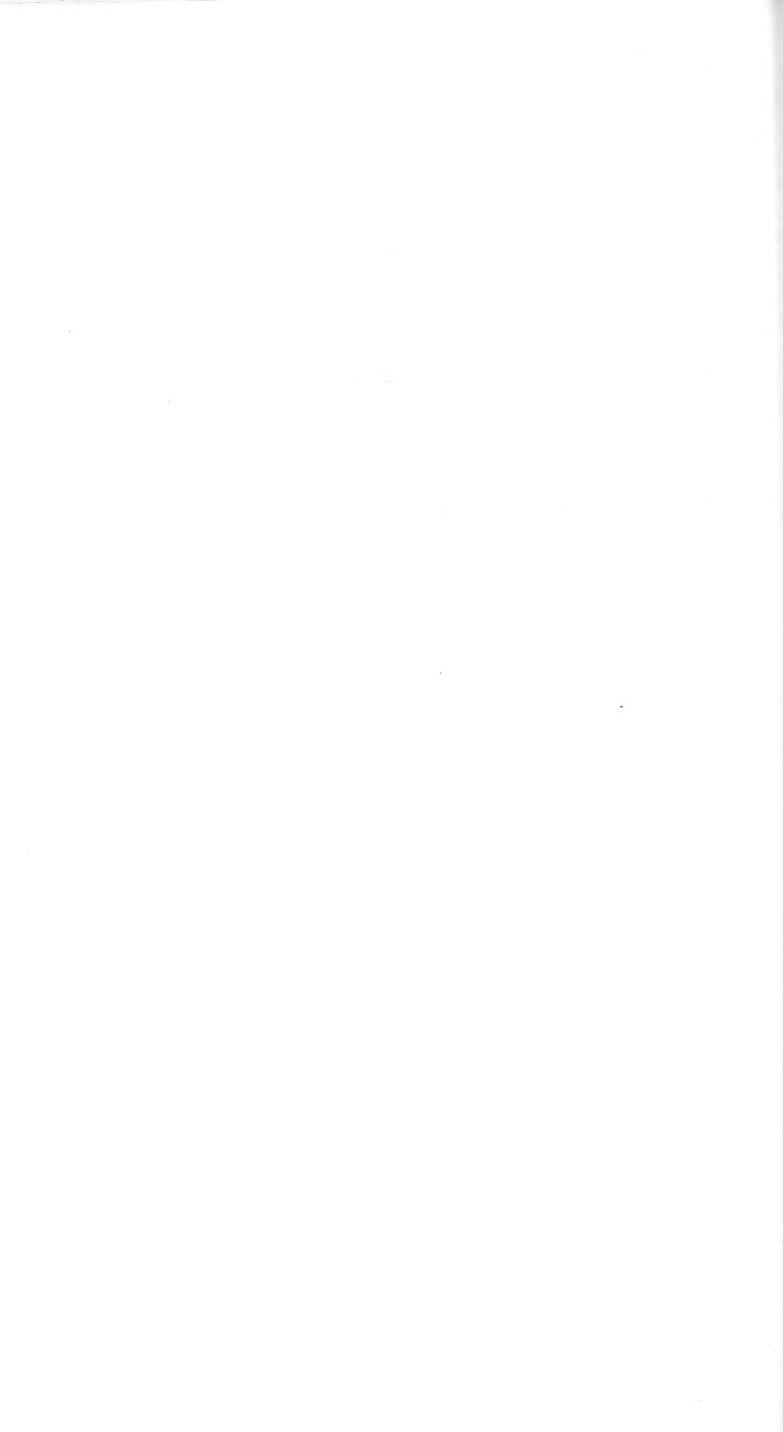
ab. comma Schultz, Int. Ent. 1.1907.1.p. 32.

On, the forewing the upper and lower parts of the silver marking are joined so that a comma shaped character is formed. The branches of the upper mark are united at the top forming an eval instead of a U.

ab, florida Dannehl. Mitt, Munch. Int, Ges. 1829. 19. p. 116.

The ground colour milk-chite, the normally blues-brown markings are pale silver-grey, the fringes white and pale grey chequered. Hindwings white-grey broads dusted grey on the margins,

The author does not say thather this is subspecific in the appendace from the coit was described. It would seem more likely to be an abstration, we have a specimen in the Tring Tussum from Algeria which are ers the description.



gamma Linn. 37st. at. 1758. (. 9. 513.

aberrational forms etc.

gamma Linn. typical form --- the metallic mark forming a letter "Y", not separate ed into two parts as in pulchrina and iota.

ab, binartita Orstadius. Int. Miskr. 1930.51.p. 256. fig. The "Y" mark on the forewing divided into two parts, an upper "V" and a lower small spot.

ab, tiltscheri Dioszeghy. Verh, Mitt, Siebenb, Ver. Mat, 1935. 25-24, n. 190. A further reduction of the genma mark, the lower part being absent, leaving the upper "V".

ab, incipiens Cockayne. Intom. 1955.58, p. 75, pl. 3 f. 6.
The normal silver mark is reduced to only one dot. Cockayne says this correspons with the ab, inciniens of P. iota which is not actually correct. In this iota form the upper part of the "Y" is present and only the lover spot absent, in Cockayne's gamma the lover part remains whilst the upper part is absent. The description however covers any form of gamma in which the "Y" is reduced to only one lot.

ab. gartneri Skala, Ent. 1.1929, 42.p. 317.

The ground colour pale and the gumma mark large and discolved, giving a most strange appearance.

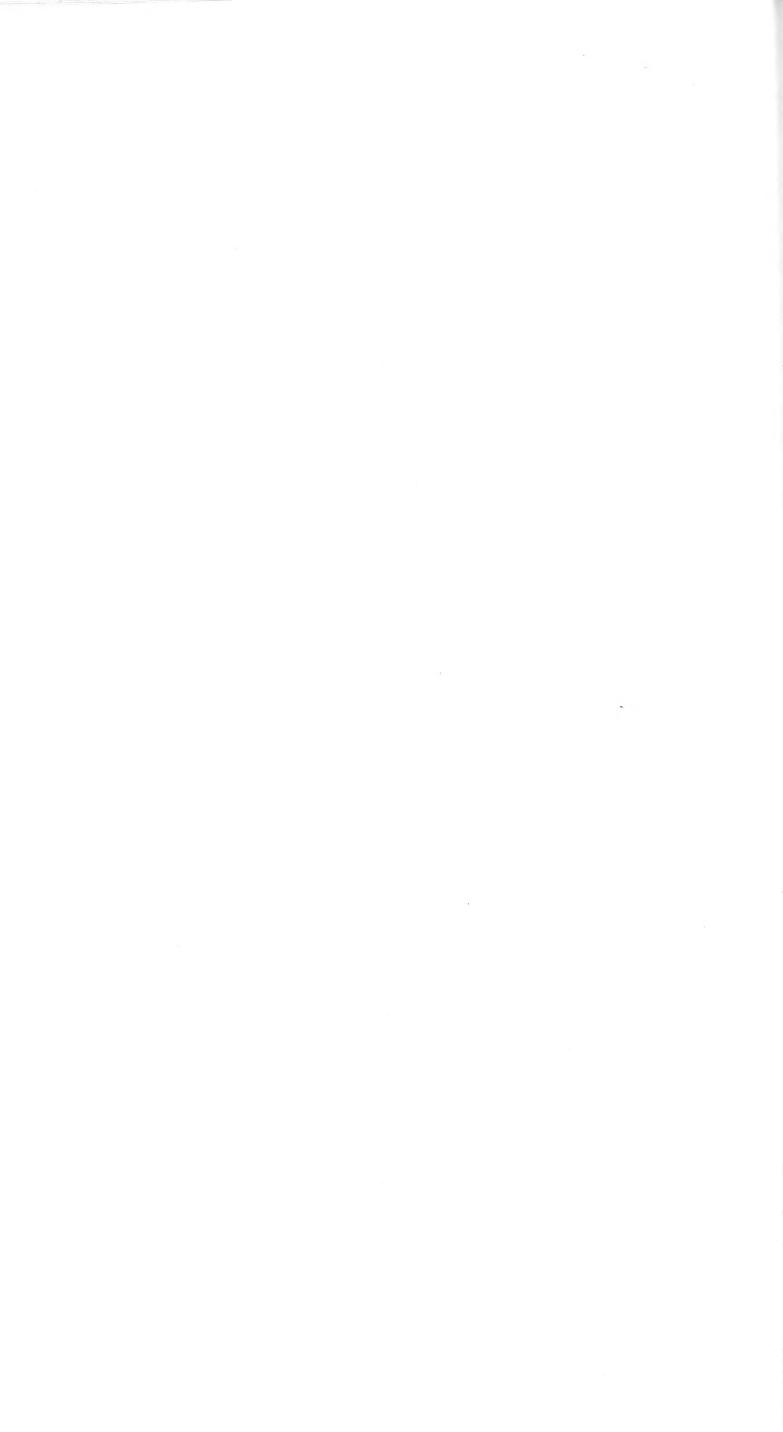
Te have a specimen in which the position of the "Y" is on a blurred whitish appearance as though the Y had been melted into nothing. This is nossibly gartneri but the description is not cloar.

ab.pallida Tutt, Brit. Voct, 1892, 4, p. 32. Of a very male whitish-grey colour.

ab.rufescens Tutt. Brit. Toct. 1892. 4.p. 34.
The red colour more pronounced and occurying more smack than usual.

ab, rufa Verity, Bull. Soc. Ent. It. 1904, 36.7.77.

Possibly the same as the preceding rufescens futt. The black suffusion of the forewings is replaced by a beautiful reddish colour, the Y mark golden instead of silver, so that it has a different look from the typical form.



ab.alba Cockagne. Ent. Sec. 1951.69. p. 164.
All parts of the moth hite, the foresings slightly tinged tith cream a the markings pale greyish; the thorax had pale broundsh-grey markings.

ab. migricans Souler. Schmett, Eur. 1907. 1. p. 904.

= purpurissa Warren. Seitz, 1919, 3.p. 351.
The forewings, except for the palar narrow border, sholly violet-black-brown tend.
Earren's purpurissa, of which we have the Proe, is the same form slightly finded to possibly a more brownish colour, although I mysoli would describe it as buller does -- violet-black-brown,

ab.brunnescens delin & Lucas. Cat.Lep.Ouest Brance.1912.0.14).
I have not seen the original description. Turner says it is "A vary wine multuric specimen with the lines of the fore-sines marked out in brown, the outer angle of the wings and the anal angle of the hindrings marked with a broad brown patch."
It may possibly be the preceding nigricans spuler since it is melanic, but until the original description is seen, it is separated.

ab. alepics. Titsche. Verh. 3001.-bot. 433. Tien. 1911.61. n. (52). The himbrings hyaline except for the broad blackish margins. The correctness paller than normal.

ab. garmina Staudinger. Cat. Bt. 3. 1901. n. 238. = minuscula Lambillion. Cat. Leg. Belg. 1904. p. 144. Half the size of normal, well marked. Lambillion's minuscula was a dwarf form with usually light or groun-colour.

ab, lilacina Lemake. Tijdschr. Int. (1946) 1949, 90.p. 118. The pale parts of the forevings beautifully pale lilac.

th, it wouldn't to M. The Mole, they that, for the standing, the grant of the standing of the

Toct. 298. p.1.

Plusia Ochs.

interrogationis Linu, Byst. as. 1738.11. K.m. 513. = acrula Sabricius. Cantissa Ins. 1787.2.5.164.

= aurosignata Oonovan. Brit. Ins. 1808. 13. p. 43. pl. 53. f. 1.

= borealis leuter, Acta Maun, Term. 1893, 9. p. 57.

aborrational forms etc.

interrogationis Linn. typical form --- the ground colour greenarbled with purple-brown, the metallic mark deemed to be separated into two parts, although this is not stated by Linnaeus, it is the most variable character.

ab. rosea Rutt. Brit. foct, 1894. -. n. 36. "Some of our British specimens are beautifully tinted with rose colour."

so, ignifera erren. kitz. 1,13, 3.p. 345.pl. 64 row c. The usual silvery mar't pale yellow and shamed like a tadnole, with loop filry-rel colour before the postmedian line, beyond the antenedian, and along the submedian Coll.

ie have the Type in the Pring Tusoum, this shows a match of fibry-red mostly on the inner side of the postmedian line on the inner margin, much as the lighter red match in P. pulchrina and some well-marked germa.

ab, aureoviridis 'agner. Its. Ist. War, 1946. 11, p. 46. In the forevings the whole costal part as far as the game mark, as also the basal and marginal fields, are thickly covered with golden-green scales which gives a quite different appearance. There only remains a small mant of the normal ground colour below the gamma mark.

ab. orbata larren. Seits, 1913. J. n. 346, pl. 64 rorb. = simplex Strand. Arch. Taturg. (1916)1917.82. A 2.p. 48. The campa mark in the form of a simple loop with a fine silvery edge, not followed by a spot on its outer edge. The Type is at Tring and shows only the upper mart of the gamma mark in fine etching. Strand's simplex had the forewing without the spot, or ring, by onl the stigma. The form corresponds with P. iota ab. incinious Lempke.

ab.flarmifera Huene, Berl. Ent. 1, 1901. 45. p. 913. = confluens Strand. Arch. [aturg. (1915) 1917.82.1 2.p. 18. The two parts of the gamma mark united, forming a flame shaped character. This corresponds to the ab. percontationis Treitschke of P. iota. Strand's confluens had the small spot united with the main part, thich be calls the stigma.

ab. magnifica Kangnow. Int. Aundsch. 1935. 53. n. 22. fig. p. 21. f. 9. The silver mark of the fore ing extraordinarily large and extended.

ab, annulata Strand. arch. Jaturg. (1916) 1917. 92. 2.5.47. Porewing with a small ring which unites with the middle of the outer odgs of the main part, which Strank calls the stigma, This is similar to Strand's confluens except that it is a ring insteal of L solil anot.

p. 4.

ab.aureomaculata Verbrodt. Schmett. Schmeiz. 1912. 1.9. 26. The metallic mark of the foresing, instead of silver-white, is of a beautiful shining gold.

	Na N	

Foet. 299.

Abrostola e 3.

This species has been called triplesia Lin . for many years. The contributions that triplesia Linn, is actually the species long beown as triplestite Hufu, its lighter insect. See next species.

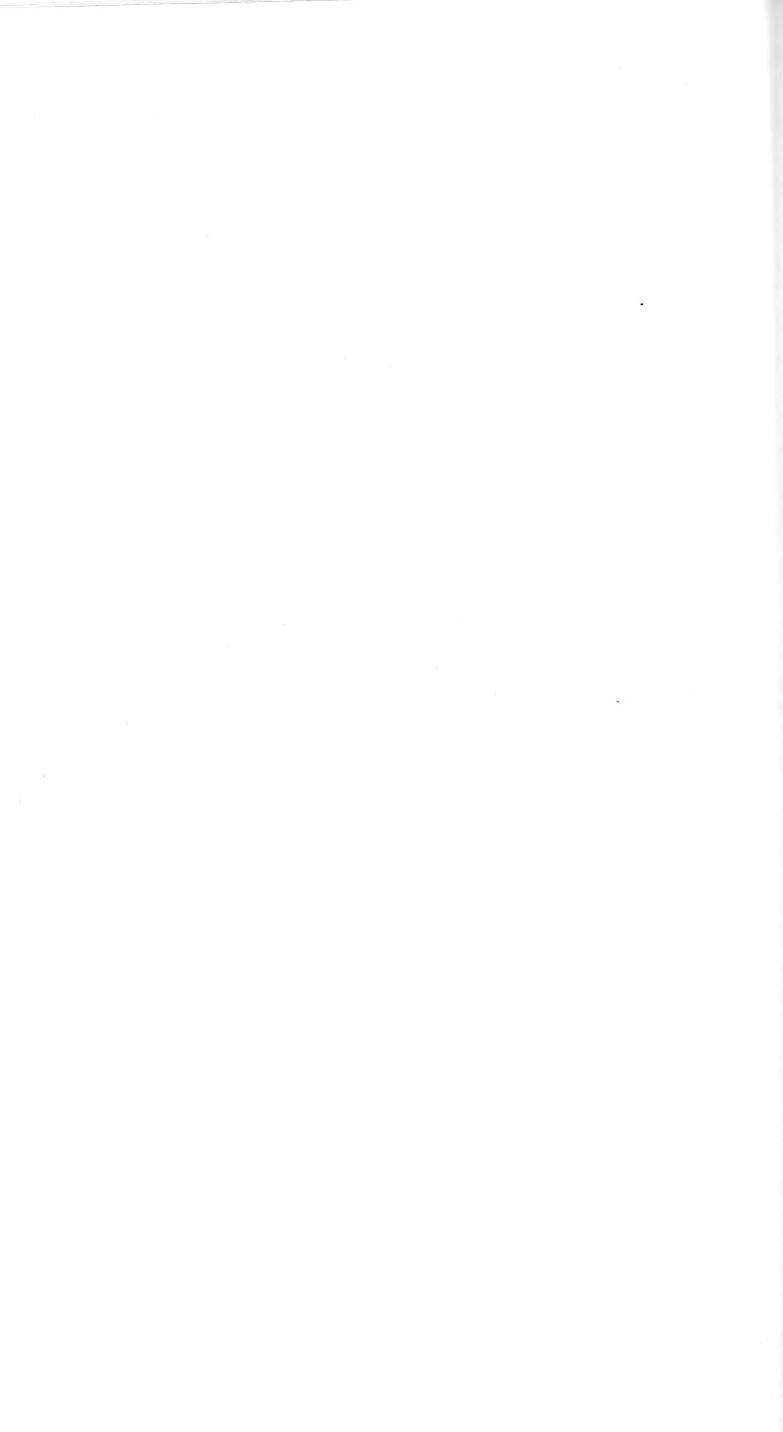
aberrational fours stc.

trigomina, erneberg, typical florm -- floroings lank brownich-bluck with pular basal area and anal angle patch,

ab, monotona Lamelto. Tijdschr, Tht. (1946) 1949. 90. p. 122. The paler colour on the florewings fails, the rest normal.

ab. juncta Lampka. Tijdschr. Ent. (1946) 1949. 90. n. 122. (descript. vol. 72, n. 197.) The orbicular and remiform join but ramain distinct.

ab. semiconfluens Lambke. Mijdschr. Ent. (1946) 1947. 90.5.124. (beacr. vol. 64. p. 197.) Instead of joining up, the stigmath are united by a louble line.



Noct. 300.

abrostola Ochs.

triplasia Lian. 3/st. at. 1758, 42. ...517. = tripartita Hufn. Berl. Mag. 1766. S. n. -114.

= triolasia Hubner, Borrd, Eur. Schrett. 1800-03. 1. 5. .. 25. = urticae Hubner, Borrd. Eur. Schrett. 1814-17. 4.1.1,7.4. 25.

This species until recently has been called trinartita Hudn. Tame states that it is triplasia Linn, the name by which the preceding species has long been known.

aborrational forms atc.

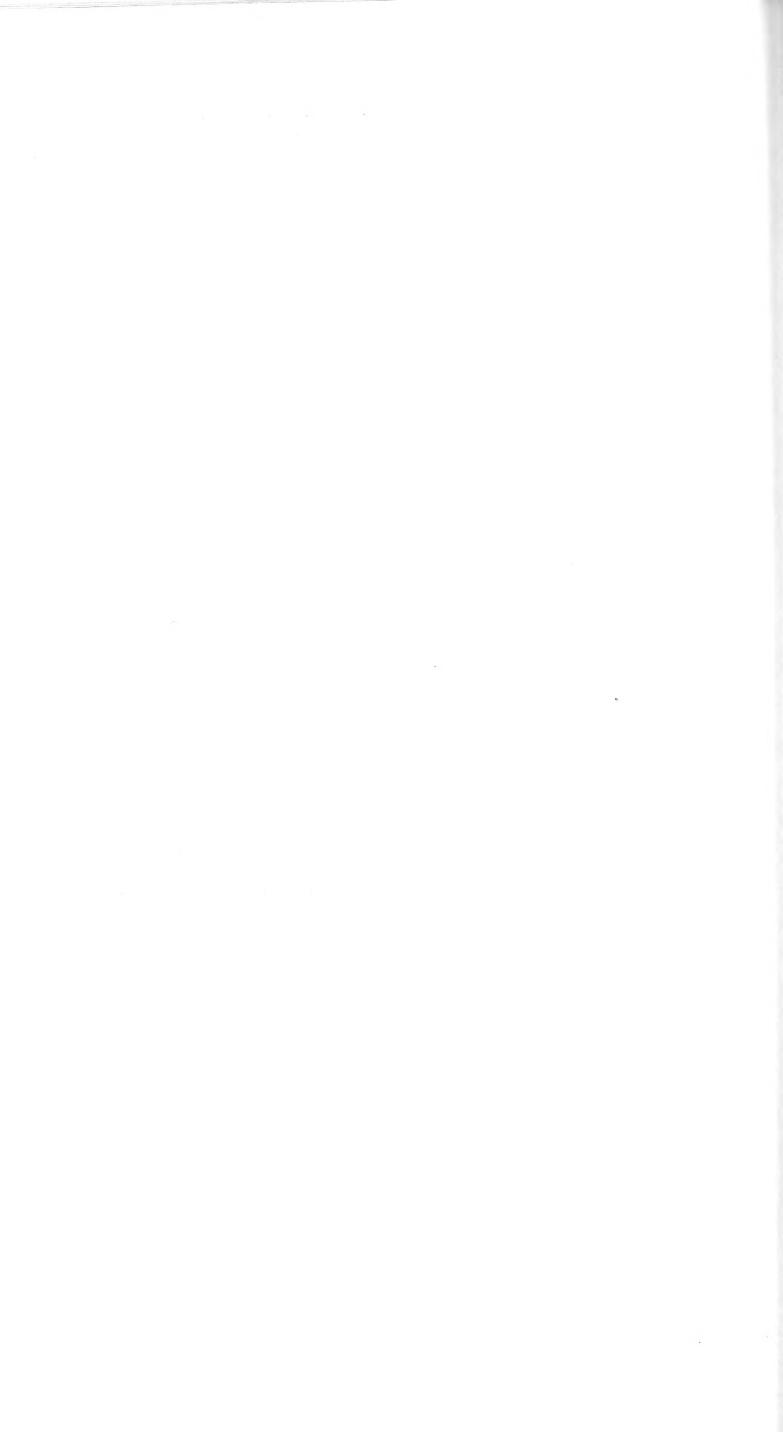
triplasia Linn. typical form -- forewings blackish-brown with lighter band area and anal angle patch which in this species are grey, not farm, as in the preceding. The fligure of Hubber's urticae loss not show this pale area to any degree but the artists of those days were not exact to such a legroe, so it is treated as a synonym of the type form.

ab. nlumbea Cockayne. int. dec. 1947. 39. n. 15.

Torswing unicolorous dark loaden grey, dithout any pale markings, but dith the usual dark markings visible; fringes considerably darker than nough. Which ing with basal area nearly as dark as the marginal area. Thorax lark lark large grey with no pale scales, but with the usual rust coloured scales present, abloned dark grey with the hairs at the base leaden grey instead of puls. (ransitional forms occur which show a restricted grount of pale marking.

ab. juncta Lampte. Tijdschr. Ent. (1946) 1949. 90. n. 12j. (lescript. vol. 32. n. 197) The orbicular and raniform join up but ranain listinct.

ab. somiconfluens Lambke, dijdschr. hrt. (1966 198. M. 123. (deserbet. vol. 82197). Instead of joining up the stignate are united by a looble line.



caerulaceaphala him. Brat. lat. 1738. F. C. S. J. . Car. how. 1776

casruleocophola Lina. typical form -- fore days gray rish tirk still united.

abornational forms etc.

ab. binartite Strand, meh. Latury, 1903, 25, no. 5. p. 12. = senarata Schultz, Soc. Ent. 1907, 20. p. 51. The two stignate of the foreving which usually run together are listically separate.

ab. orbimaculata Strand. Arch. Laturv. 1903. 25. 40. 9. 5. 19. The two stigmata joined together as usual but in addition, towards the base, between them and the first transverse line, thore is a third stigma, round and small, coloured as the others and sharely defined.

eb. coalita Havos, Ent. filskr. 1914. 35. p. 14. confluens Dammer. Ent. Z. 1922. 35. p. 190.

The tro stignate so flused to jether that one large shot in domed lith two gray hornels, (from the tides p 41).

Turnor's confluence had the immer eight of the tro stignature or united that war years large shot is formed.

ab, protense Lempke. Tij Ischr, Tht. (1946) 1949.90. p. 114. The orbicular stigme lengthened that touching the inner line.

ab. obsoleta Lempke, fij lechr. Bat. (1946) 1949.90.9.124, The remiform stigma abnost or completely listopecare.

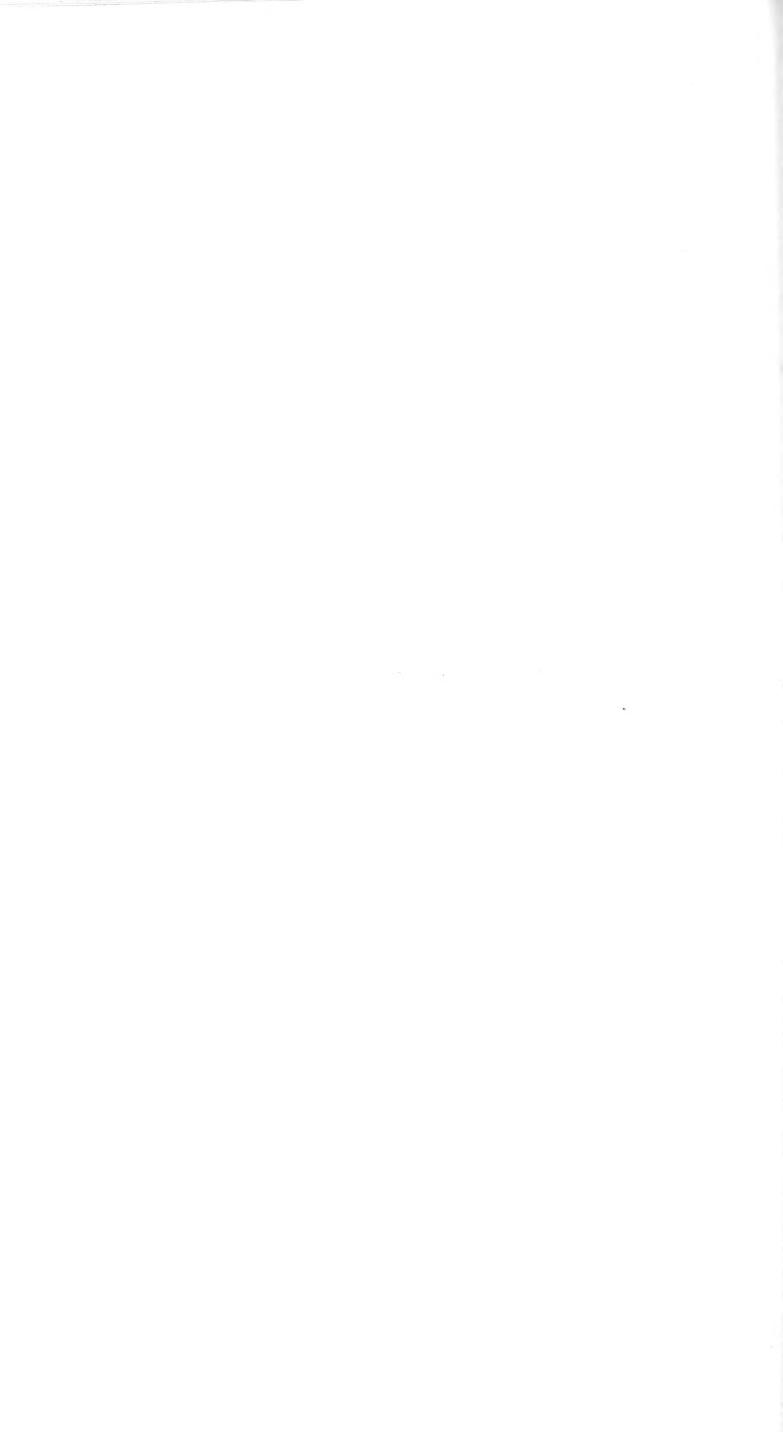
ab, funesta Jocksyne, Ent. Ge. 1961. 66, m. 164. fig. Burnott ml. 115. f. e. The usually consciouous stignate on the foresting are the sum colour at the rest of the ring and therefore invisible.
The Type specimens are in the 1.6. Theoliestion at him; and there a time light spot on each ming, all that remains of the remains.

b. capnodes Dannehl. Ent. 4,1925,39,5,152.

Poroxings with gray-blackish ground colour, without the blui h-wides to a and with an increase of the blackish tone over the stignature of that the outer one, often both, appear sooted over. In extremes the whole smedimen gives the impression of being unicolorously black-gray, only slightly lightened on the costs in place of the stignata. Hindrings considerably larker than in the typical form.

Very close to the preceding funcate Cockerns, especially the estrone form mentioned. The highwings however are also denitered, which is not the ease with funesta. The name would apply to specimens in which the stignate are sooted over but are still apparent.

ab. influenta Schwingenschuss. Verh. sool.-bot. Gus. ien. 1918. \$8. m. (199). The fore and hindwings, thorax and ablence, darkense to bluek-bro n, and she usually white-grey stignata yellow.



ab.nigrofasciata Hackray. Lambillionea 1903.03.p. 54.ml.0 f. ...
The postmedian line of the dorswing widened to form a very black band duich in its upper part actually reaches the remident. The ground colour lagetor than normal.

The figure shows the postmedian line usually very wine are not beneated to remiform, without, ospecially in its upper helf, and interestly black, the willing from the costa to the inner margin. The upper part is so without as an reach the remiform stigma.

ab. medionigra van lisselingh. (nom. nov.pro nigroflasciata v. ling nes Mac'm.)
Ent. Ber. (lmst.) 1966: 26:p.169.

=nigrofasciata van Wisselingh. (nom.praeoc. Hackray) Mat. Ber. (nust.) 1966; 26:0154 Thorax and abdomen black, collar dark brownish-grey; foregings with black central area and normal light stigmata, basal area and submarginal ["watered"] band dark brownish-grey, marginal area blackish. Mindwings dark grey. The description is from the Dutch, as the English translation is slightly incorrect.

Van Wisselingh himself re-named nigrofasciato, since Peerdanan pointed out to him that the name had already been used by Hackray in 1933 for a completely different form. -- see above for Hackray's nigrofasciata,

Acondia chs.

luctuosa Schiff. 'in Vor. 177). . . 9.

abarrational forms stc.

luctuosa Schiff, typical form - the mote white on a black grow .

bb, ochraces Tutt, Brit, foct, 1894.4, 5, 2. The large characteristic spot on the forevirge schroons instead a line.

ab, rosinens berthur (Oulot). Poets, 1919-17, 2, p. 144. The brown tono, which is very durit in the typ. form, becomes light rellish-brown,

ab.lincora Spuler. Schriett. Hur. 1907. L.m. 197. The dark marginal band of the derings senitions with a record antenarginal whitish spots; on its inner sile bordered by a duen black fine line, some tes by yellow.

The lescription is somether pursling, there seems to be no puller in the marginal bank, bother calls the form the "Tany Line", it is no sumably characturized by the rose of white automarginal spots thich, normally, is not complete.

ab, chacerosa Bouler, Be'matt, Bur, 1907, 1, m, 207.

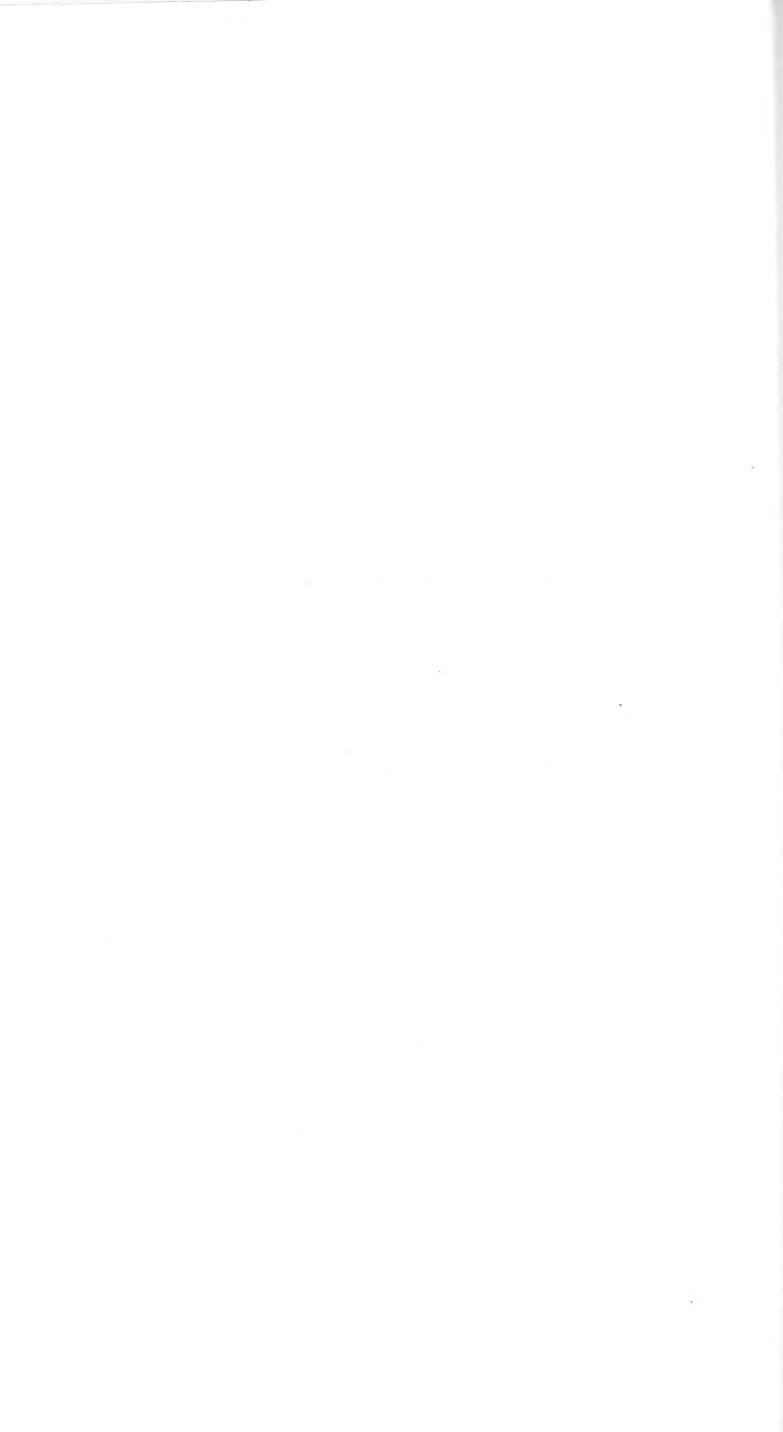
= rolucta Cockayno, But, Rec. 1931. 69. m. 164. But whitish smot of the foresting and the which his bid to bunk warr grankly roduced.

Cockayne's reducta can hardly be repenated; it has the strict control of the flore ding much reduced and conserted from the costs, and the little interior to hindwing reduced,

ab. angustifascia Jarran. Britz 1913. S. n. 186. 4. 32 ray K. on the high ings the white medium bank is greatly restricted and computer a interrunted.

ab, latofascia Scharerda, Ent. undsch. 1938. 55. p. 354. The emposite to the preceding angustificion arren. The faite mills bank of the hindring occuries more than half of the ring; the black at the base and that of the outer margin reduced.

ab. mallidior Bilbernagel, L. den Ent. Ges. 1944. 2). . 150. The chole forewing surface light yellow-brown, also the brown early marginal ban' of the hindring is lighter. Very near ab.rectivant thermum in thich the forethic is light resultherness.



Moct. 303.

Lygophila Billberg.

pastinum Preitschles. Schrist. Aus. 1826. (5. .497.) = lusomia Mubner. (acc. Linn.) Semil. Tum. John 188. 1000- 0. d. 1.5.

aberrational forms etc.

nastinum Treitschke -- typical form-forevings gregish

ab. mallida Butt. Brit. Toct. 1892. 4.m. 43. = decolor Tarren. Seitz. 1913. 3. p. \$8. rov T.

Forewings of a whiter great than the type form, the transverse been or firefler obvolets, squeetally the been area but een the subtantical or langualited lines; the lark scales which give the type a more mobiled agreenunce, very fer the number. A much paler form.

arralis lecolor was "much paler without any brown tingo."

she ladiced Ha worth. Lon. Brit. 1809. p. 1.59.
The single specimen mentioned by Ma orth was a misidentification of the Continental ladiced Hubber. The leadmination says the flowerings are factors instead of move, with two obsolescent strings towards the appear to be bloss more remarks in Brit. Foot. IV. (he says that the flower could appear to be bloss more which have the outer margin strongly browned) are somether outsling, there is nothing to suggest this in Marorth's lescription. Lembe has copied but and gives ladiced as an aberration with the margins desirence. If the ager is not all, it should be for speciment hich are more functions that the profile typical flow, the fuscous not being confined to the margins only.

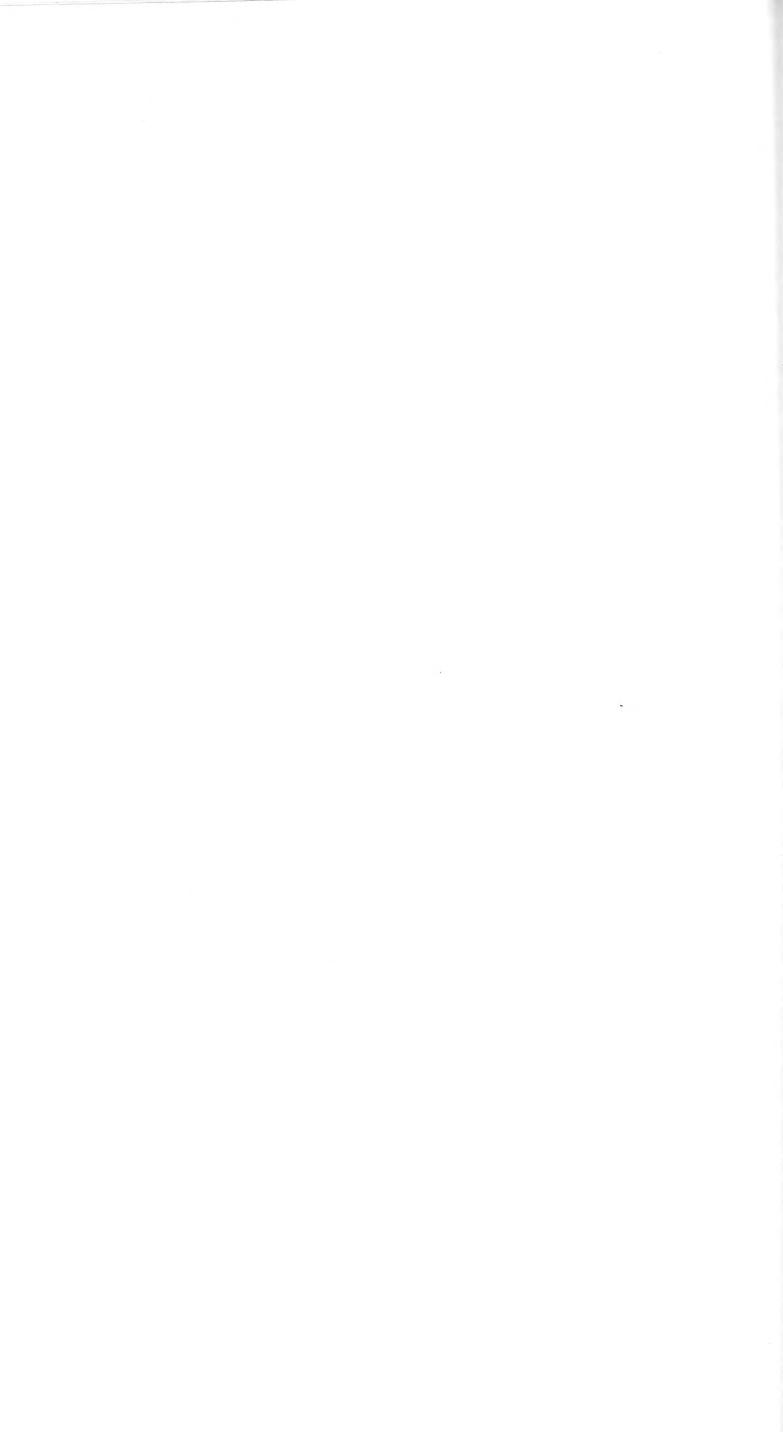
ab. dilution Standinger. Inis 1892. In . 97...
Unch lighter than traical, the brown time almost completely absent. The condition crescent mark much narrower, the two black spots at its loser and more or less absent; the orbicular in some specimens completely absent.

Year similar to mallida fust but with reduced marking of the skipata.

ab. impuncta Lampire. Tijdschr. Int. (1,46) 1949. D.n. 126. The black roint in the place of the orbicular stigms fails.

ab. obscura dockayne, Wat. dec. 19.1. 63. p. 164.
The ground end our of the foreting much larker than usual are almost the surrection as the subterminal band, which is also unusually dark. The bind is also darker than usual.

ab, elongata



craccae Schiff, ion Ver .. 1775.p. 54.

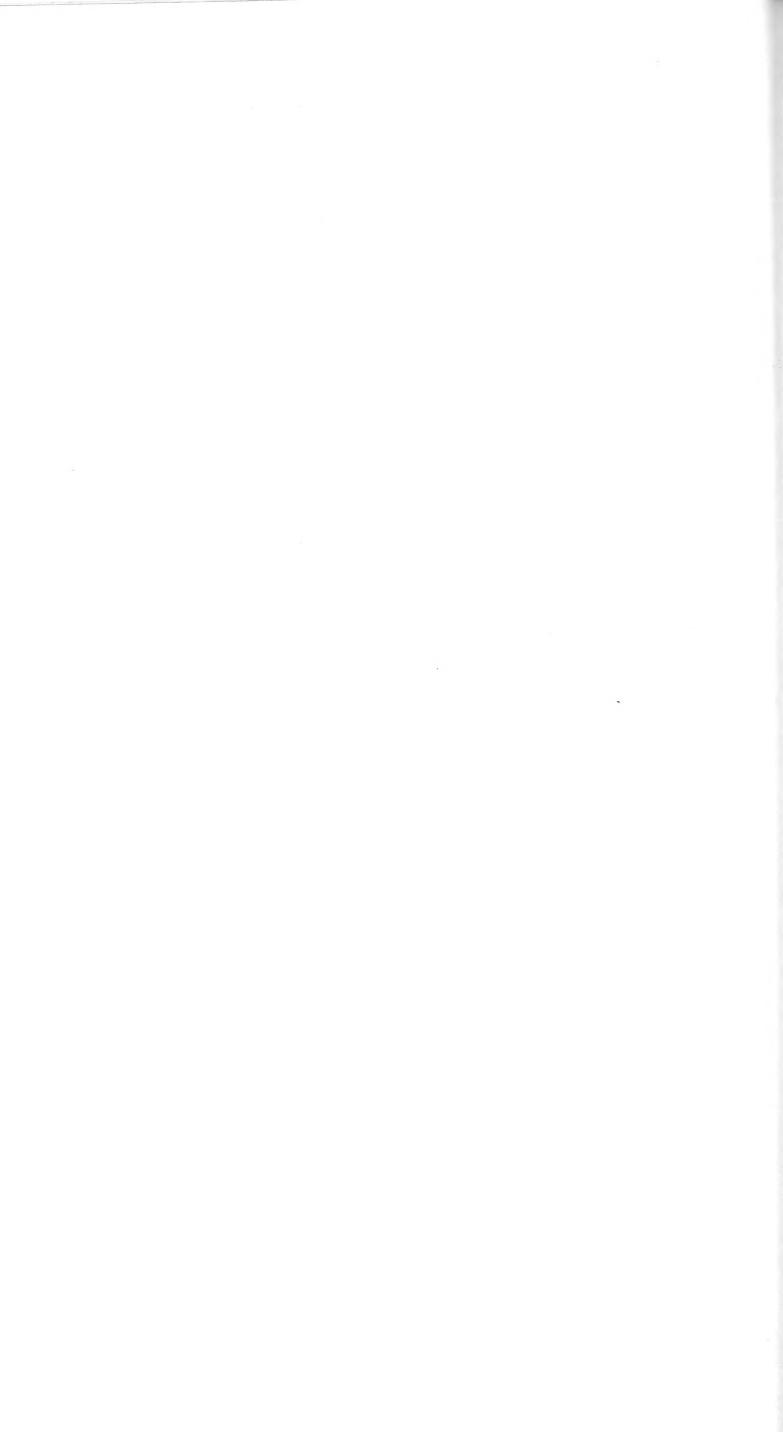
aberrational forms sto.

ab, immaculate Staudinger. Cat. III, 1901. n. - 5-. The remifform without the black marking, aday the shalings showing.

ab, plumbes Bankes. Ent. (ec. 1905.18.p. 58.) Porewings bluish-grey, nore or less mixed with chocolate-brows, whe terminal third much obscured by it. He costal black spots and triangular mark or darker than typical, the remiform chocolate-brown partly black-maryinal, the orbicular varies from a black point to a minute white dot. The 'minute grownich-grey instead of pale greyish-brown, The form is conscioudly marked than the typical form,

ab. brumes farron. Seitz. 1915. 3. p. 374. al. if your M. Insteal of the typical grey ground, it is brown, constinues with a ruleur bings.

ab. perstrigate Tebel. Fun. naturh, Follows, ien. 1911. 19. p. 949. Tore gray than brownish with very prominent transverse stripes. Description from Deitz, I have not seen the original.



Jet.305.

ivula Guenco.

aberrational forms sto.

serice Alie Boom. -- Fore dangs yello ish- hite to light yello

un. lutes. Larrie. Mig. selve. Tim. (1, 3/.1) U. (1. 14).
Ordingo unicolorously elem y dilor tith lark control (1.5 odr.

..., limbut. onular, schmett, hre, lyny, l, a, a, a.
Torowin so with the margine, from the outer targets of the plack of so your brown, also showing above the restricting obligably to the immer margin, their stream. The himse transfer, their stream.

ab.lastion Bouler. Schnott, Eur. (1945/1947.99.194. Coronings more inconsive brown-pollow.

Ab. cenipontana Hellwager. Ver's, sool, -bot, gos. Tien, 1,00, 74. . . /ll. = brunnea Lambillion, Jat. Lon, Belg, 1,04.p. 109.

Forewings without any trace of the normal yellow tint, The ground a low in grayish bono-white, towards the outer margin becoming warp strongly has a with brown-gray scales, in entrane chockmane element undestrous far't seek-brown, with violet-gray silky theer.

Lambillion's brunnea was of a lark gray-brownish tint.

ub, signata Lemeire. Tijdseim, Thrt. (1946) 1947. M. 1.10. Torewings with a snam second dies, hi norings the librathet thanks mor lib. .

Coolioptery: Commun.

libatrik Linn. 1730, Lat. M. I . 17 / . n. 50/.

aberrational forms atc.

ab, suffusa Tutt, Brit, oct, 1892.3, n. 97. Torevings Juli greyish-fuscous with no red on the outer nugitue.

ab.pallidior Jouler. Selmett. Bur. 1907. 1.p. 137.

"This is all the description says. It presumably means that the gravier 1 oknowerials the raddish.

ab.mallila buller. Johnett. hur, 1907. L.m. 297.
Paler, more yello tish specimens.
Toperibe the number from furitestan but thankt agree the form recurred to the technique to have specimens from furitestan which the thirt the two form the occurrents the above stion, so it is not racial.

ab. irranacta Lampire. Tijāschr. Tart. (1,45) 1,45.30.5.1 5. Tie shito centrul sot on the Borostings Shils.

ub, approximate Lampte, Tighschr. Mat. (1946) 17 S. M. p. 1946. The inverse and outer lines of the formulage ethnic elless to the w.

th, besting unicolorous furt violeth-guer dith to be it in hea; the stiff of the curtical strongly related and grey sufficely for the two transfer and line as brought for a terms of the strongly of the stro

ab.umilined Lempho, Tijduchr. Tot. (1905) 1909, 10, 100. The inner transverse line of the Cora ing fluils completely.

.

loct. 307. p.l.

Phytomotra fubner.

viridaria Charck, Iconos.1759.1. 1. 6. k. = 1.ccaba Joonoli, Mat. Cara, 176.

= gone, Mubner, Beitmago Behanth, 1785-89.1, (9). -. 1 . 1.1, . - olivace. Viovey, Tab. Verz. 1789.4. . . 89.

= apapa(latamicula) lunac. Dur. jeimott, 17,1, 1(1).n. 17, 1.16, 1.4.

= numurate Pubricius, But. Spot, 1796, 3, (... . . . 1.

Modrational form sto.

virilgin Olarek, braical form -- the promise adour thin the prince of a many applies marginal bank bank becomes once, for figure of a many Tubner in his Beitrage is also plive green, bust authors can to have misse The Beitrage reference and give land, Bur, Greet, Mig. 17, Mich is estence much linker and from telling Autt, and haplic ote as an abordation. It is a stanling since near Thirde is the section in the State and in a synonym of wirill min Moret. This we figure three lifts were found, the scale? acnes - the first in the Beitrage, the second in Sard. Eur. Schmett, fig. 350, the third in the same work fig. 654.

ab. aenoa Harorth (noc. Hubner 178) hep. Brit. 1809. n. 126. The ground colour fluscous in stant of olive-green, The olive figur 950 in Hubner's Commi. Bur. Schnett, agrees with this description and Basarin ethis it but Hubner's first figure of aenea in Beitrage of 1783 in bus same as Therest' virilaria and so stands as the true acrea Hubner. The lark mes figure in the lartist and varios in his prome copies.

ab.ciacta Treitschie, Schrett. Bur. 1824. 7. (3), 1. 17 . (Thu. Reval, Bur. 181. 813. (34) This may or may not be the same ... ab.fusca Tutt. The author warpels are the fore rings are often dull and brown-gray as in Mubner's Sigure 694 (an almost derthin error for 654 which is called senes, 634 being dasychira). Tig. 654 shows the ground colour greyish-brown with the normal purple bands replaced by dark, almost blackish, brown, especially the median one, which is wider and darker than the marginal ones. This median line is continued on the hindwings to form a rough circle, the probable reason for the name "cincta". It is separated here because of this striking median line which, however, may be the exaggeration on the part of the artist.

ab. fusca futt. Brit. Noct. 1891. 4. n. 60. = nolosta Caradja, Iris 1896.9.p. 50. Jobally fluscous, without the purple bun's, Caralja's molesta wholly unicolorous far't grey brown to olive-brown without any trace of the purble benis, in their place are narrow, lark, brown or blackgray, atripas.

ab, ljungdeldi foristrom. Svenska Fjarilar, 1940. p. 213. pl. 34. 1. 1c. The numple bunds ronlaced by dar't groy-green. The coloured fligure shows the ground colour light gray-green with light of

ab. suffusa Tutt. Brit. Moct. 1892. 4.p. in. ings blackish-fuscous the mangine somethat factor.

ab. roducta Loupko. fijdschr. Int. (1946) 1949.90. p. 18. Fore days with sharply contrasting purple contral band, the one before the outer margin fails,

Toet.307.

ab, seminurpurea Kieffor, But, 1, 1941, 55.p. 159.
Ground colour dark olive-grey, a transverse band unicherupted our le-r .
Far as the margin, the fringes also purple -rol.

ab, hoffmanni Stauler. Iris, 1915, 29.0, 30. Ground colour loan or clay-yellow, the buter area from the middle but arealy-yellow, the buter area from the middle but arealy-yellow, with no interruption of ground colour. The colour of the hint ings also lighter than in typical specimens.

Very similar to the precoling but of a lighter ground.

ab. faecata Staulor, Deutsch. Ent. 1.1914.p. 28. Ground colour unicolorous dirty pale loan, or clay, colour; the busis exact that or almost completely disconsared.

Appearently an outrone form of ab. ljunglabli for latron.

abigurgurian Morbrolt. Mitt. School Ent. Jus. 1917. Cl. . 196.
The roll colouring covers the ring almost to the buse, to four a broad uninterrupted bunk.

foct.308. .

Parascotia Wubner.

fuliginaria Lina. Arm. Mac. 1761. ... 7. = carbonaria Esper. Tur. Schnett. 17947. 5. 5. 18 ... 1. 99 (i.g. 1 ... 5.

borrational forms etc.

fuliginaria Lian, typical form -- tings black, with white strings formed of sorts,

ab.varigata Lampite. Tijlschr. Unt. (1946) 1949. 30. n. 127. The marginal area of all vings yellow-grey, with lart lines along the nervur ...

ab. fleva Homuzaki.

Tarren's description in Soits says the male has quite male ochreous mings with two blackish fascise in the millle and almost obsolute terminal spots; the fonale is pale yellowish-brown lith larker dusting, especially in the basal and terminal areas.

ab.? magna Diosneghy. Verh. Siebenburg Tor. Futurv. 1950.75-00. n. 4. 1119. Very large examples neasuring 28 mm. Torovings yellowish-thit, lendely make at costa and sharesly lusted from base to mosterior transverse line, maginal area to subterminal shade levoir of dusting, recent for the voins and the margin itself. Him ings coarsely on lensely dusted with very listing marginal lines and listinetly chequence fringes. This is Draukt's description in Beitz, I have not seen the original.



Toet. 309.

Bomoloch. The on.

cherrational forms etc.

erassulis Tabr. typical form --- the nale with large e that nare lar brown, the rest of the sing grayish, the forche with highter much and highter narries.

The terriculation funct. Samul. Tur. Telmott. [Ell-1]. Pyralicas 1.23 f.16]. Thost entirely bluck-brown except for the authino of the large entirely which is a fine yellow transverse line, and a row of white subaryhard motorich form a second line, the margine otherwise are completely largered. Him brings also very much larger than typical.

ab. brunces is the lim, deliment, bulbuyorm, 1927, a. 369, el. 15 fig. 16-17.

Toro inguith at the grey-white lusting in the targinal field, the groun.

colour reddich-brown to derit plays colour, complete the processing bearfielded out lifters in the groun' colour.

A superfluous news in my opinion, in one copy of Hubbar's more tarriculation the ground colour is dark brown but in the other, such hi jutar, in such relliable or mythe colour of dethelder's brunces.

ab obliterata Ostholier. Schmett. Sulbayera. 1927. n. 370. nl. 16 (1.15-1). The outer transverse line, thich normally beclors the large contal maining completely abrent. This line is normally male and quite listing talking to outside white; in both figures by which he much of this midt is absent as in terriculalis, thereby showing the abrence of the perturbing much more pronouncelly.

This is placed as a smooth of the time form, the above, since the colour this is placed as a smooth of the time form, the above, since the colour the figure cannot be superable on any particular character. It is army the articles has made the posturity transverse line too white and the margins somethed too dark, items which cannot be trusted in this older of the margins states that in a female but by the pattern it is almost certainly a male. In the later took, Jamil, Bur, Johnett, Tyralides of. I fall, Tub or figures colability again, a combetch limits went lating in sect, obviously a female, is to margine which as normal females, but with a very beaut transverse nor of black order gived smots, another obvious anaggmention. It would seem that the adaptable of the sectors and the achievalis of the small females, and fall as a small or of crustalis. I make the adaptable to be seen in figure or which to be described on the achieval to be a lighter than typical females.

aborrational forms ote.

broboscidalis Lina. thical form -- ground colour grapish to but grapish, with ferruginous strines.

ab brunea lutt, Brit. Tet. 1892, 4, p. 54.
The brighter and more ochreous tinted specimens as distinct from our larger specimens, which are the typical float.

eb. influscate Spuler. Schmett, Sur. 1900. L.m. 1900.
The him brings, as also the foremist, and lusted over with lark brown-gray.
This presumably means that the himlings would still be sawwhat lighter than the forewings, if each were dusted over the result would be a lark med specimen but still of limber at shales on fore and himlings.

ab, purpurascens Lompke. This being lab, (1946) 1949, [A.n. 197. The ground colour of the fore days purplish-brown, the updaings correl.

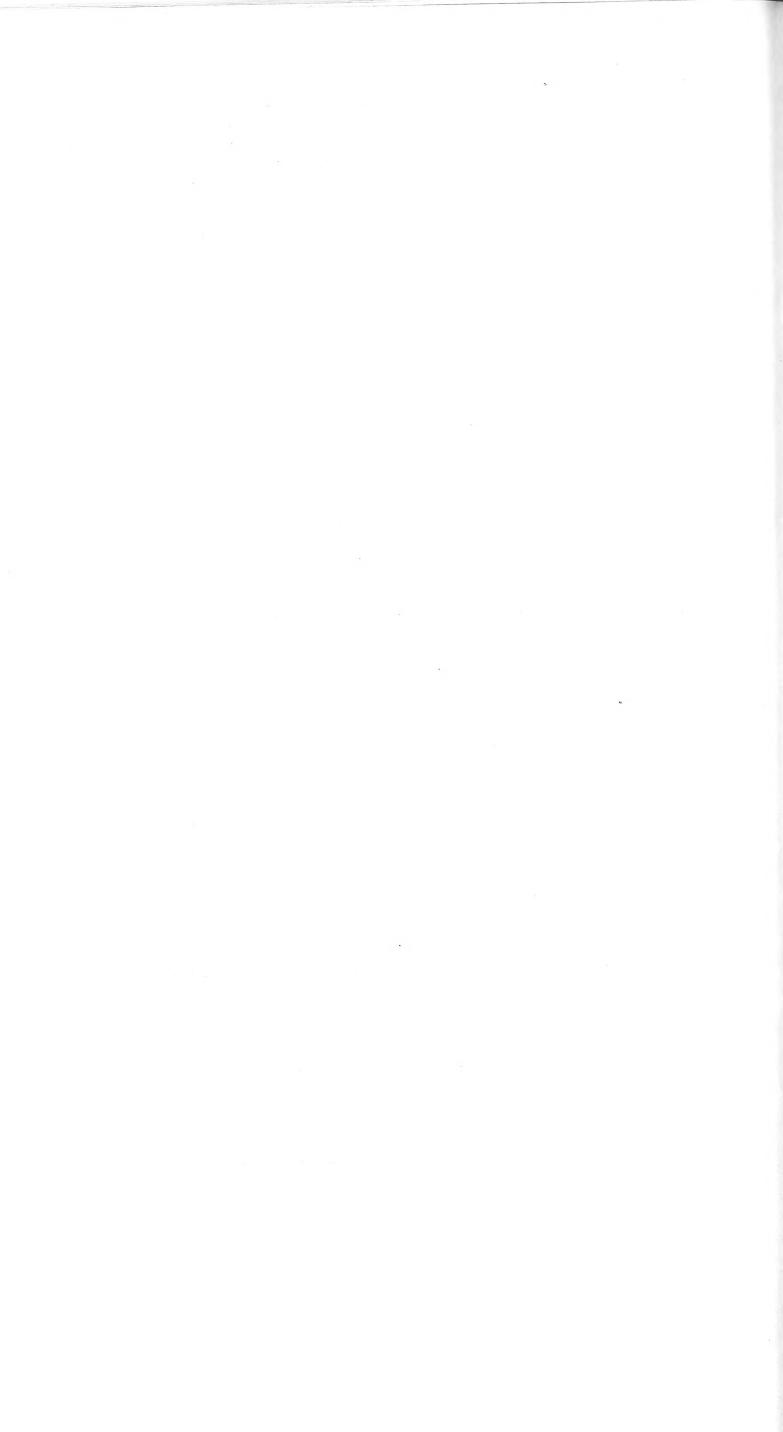
ab, bilineata Lampke. Tijlschr. Int. (1946) 1 49.90. n. 139. The subterminal line fails; grown colour brown-grey.

ab. obsoleta Lompke. Mijdschr. Tht. (1946) 1949. 90. p. 199. All the transverse lines obsolete; the ground colour brom-grey.

ab. brunnea-bilineata Lempke, Tijdschr. Int. (1946) 1949. 90. n. 139. The subterminal line fails as in ab. bilineata but the ground clouw is clear brownish.

ab. signata Spuler. Schmett. Eur. 1908, 1. n. 330. The white mots on the subterminal line, mostly only present as traces, leveloned as larger triangular or cuneato spots, up to five in number.

gen. aest, perva Handenena, Int. But, 1,1917.10. p. 122.
Summer brood, Bout a thirl smaller than the Spring brook typic 1).



oct. 311.

grana Bohran'.

aberrational forms etc.

- 9 rostralis Liun. 9. typical form -- fark grey to brownish-goog, incorning to markings, the formale of the spacios. The male is pulpulied Tabricius.
- of palpalis Pabricius. Sof restrulis him. -- that groy to that brown-gree, presumably unicolorous. The leseription merely says "able grissis, posticio margine crastioni albo", the latter apparently refers to the uniteralist thick is thitish on the margine.

Tule forms.

o ab. ochros. futt. Brit. Foct, 1891. 4. n. 64. Unicolorous, ochroous or grayish-ochroous.

of ab. unicolor fubt. Brit. Foct, 1991, 4, n, 54, Unicolorous, pale greyrich

ab.brumea Lamble. Mijlachr. 18th. (1946) 17 9. 10. 11. Unicolorous, close brownish dishout gray tint.

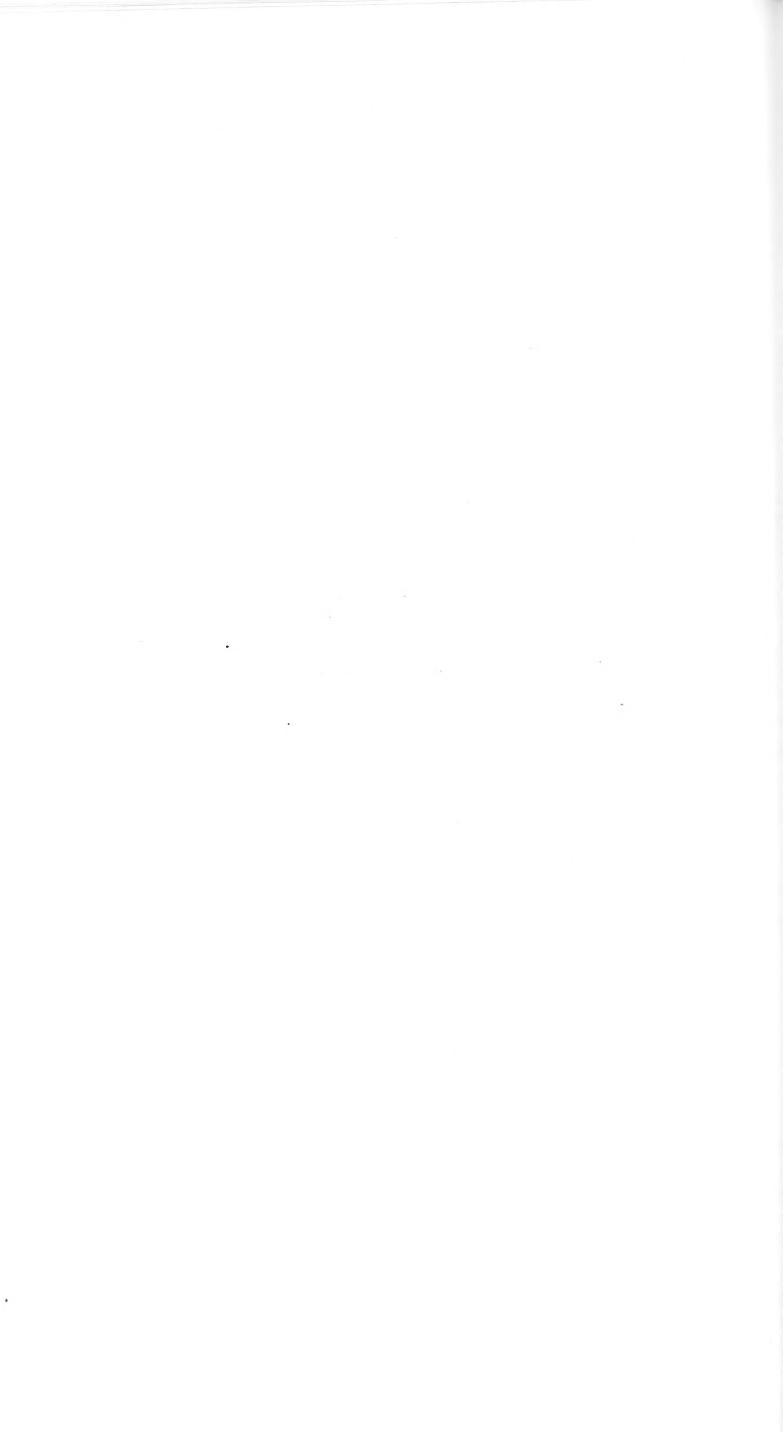
ab. sprotons Deunchl, Tht. 1, 1926. A. n. 99). Darker than ab, unicolor litt and sho ing a strongly shite-sure and a should stigma. These white circles give the impossion of spec, here the an impossion

ab, fimidialis) as the list, 1,1970. 17.7.3...

For wings from the base to the harder wishble make burn, somether tally added to the mark, but the outer hald strongly hight and. The summer final is hardly ablicable, in ampeauance they are full unicolorous some fact are talling absolute.

and forms,

- 9 ab, odnrew-variegate Inst. Brit. Vet.18%, in. 6.
 odnrews or gr. Mill-odnrodus, Mil. Metinet werm gr. 7 amagat om.



male forme en bisu L.

i amo occurring is both nel un d'ambe.

ab.vittatus Tavorth. Lop. Brit. 1809. p. 367.

- vittatu-varisgut. Lembr. Mijlache. Bat. (1, 5, 1,4)., ... 141.

Fore tings light grey with furoms elm lings, ith a broad crown a stall water or bank. This bravels from the base to the lost.

Lembra has named the final form thich would seem to be superfluor. The major a symmeth here but can be used for finales in to be single.

The control of the co

bardan han nearl the serve form in the formule frich I convil a probablicance, it can be used in to desire how in make a propert here.

two mights Hubber. Saml, Hur. John Jt. 1860- J. - - 1. 1.2... = Albistrigatic Maworth, her. Brit. 180, ... J.C. = Albistrigatus Stephono, Ill. Maust. 1834. 4.7. = Acuminalis Merrich- 'S' Com. Derbach. Ical 190. 5.16... 1... = Acuminalis Merrich- 'S' Com. Derbach. Ical 190. 5.16... 5.16... = Albistrigalia Guanec, Mist. Lt. Ica. 1894. Fyral. 8.9... 2.

aboutational forms etc.

ab. obsoleta Lompho. Tijlschr. Int. (1:45) 1:49.90.p.1-4.

The transverse lines obsolete.

That is Lamples's translation into Haglish, the Dutch he svor reals "the branch to lines very weak,"

Toct, 313.

Jehrankia Hubner.

costaestrigalis Stephans, Ill. Manst, 189 . 1. 1. 1. 1. 1. 1. 1. 189 . 2. 1. 1. 1. 189 .

aberrational forms etc.

costaestrigalis Stephens -- typical form -- Porovings grayish-brown, it's a somewhat triangular fluscous patch boyards the apec of the costs.

ab.monotona Lempke. Tijlschr. Int. (1946) 1949, 90. n. 144.
Forewings unicolorously brownish, without the dark costal blotch, the two transmissions distinct, as a rule borlered by yollow-brown.

ab. unicolor Lemoka. Mijdschr. Int. (1945) 1949. 90. p. 144.
Forevings unicolorously brownish, without the tranverse lines.



Moct. 314.

Hymonodes Doubladay,

tumfosalis focke. Broslauor Tht. 1.1650. d. 1.1.17. = humi lalis Doubloday. Boologist 1850, 2. ipp. 11, n. 37.

aberrational forms sto.

turfosalis 'ocke, - typical form -- forowings light brown-gray, with indinat transverse lines.

ab, bicolor Lempke. Tijfschr. Int. (1946) 1949. 90. p. 145. The basel half of the forenings durk, the outer half pale.

ab. obscura Lembre. Mijischr. Int. (1946) 1949. 30. p. 145.
Forering unicolorously lamb gray, with the normal transverse lines.

Woct. 315.

ianclognatha Lederer.

- tarsinennalis Preitschke. So mott. Mur. 1887. 10(5). . . .
- = tarsicrinalis Hubner. (nec. Knoch.) Sarrl. Eur. Schnett. 1795. yr. C. J.
- = denticornalis focks, Broslauer Bat. 1.1850. al. 4 f.15.
- = kuverti Fuchs. State, Int. 1.1°75.p. j9
- = varialis Fuchs, Statt. Int. Z. 1873. n. 39.

aberrational forms etc.

tursinemalis Treitschko -- the ground colour brownish to brow-gray, it's three transverse lines,

the bidentalis Meinemann, Schnett, Deutschl, & Schweis, 1859, I.n. 50.
Lampke restricts this form (which liftings only very slightly in colour from the typical) to the only definite character given in the lescription. This is the outer or subterminal line of the him wings, which is not angled or besite? We have typical form, but rounded. See Lambto, Mij Schr. Wat, vol. 50, p. 194.

ab, lelineata Lemble. Tijflechr. Int. (1945) 194. M.p. 194. Torevings with the issue all outer lines absent. In his escription in luter Lempke says the first and second lines.

ab. obseum. Hempies. Tigilschm. Und. (1944) 1947. (90. s. 174). Tomertings famlt grey-brown, nob brownish to brown-grey on it to be attained nom,.

ab. mare loka Cockayns. Int. 196, 1991, 59. p. 164.
The areas on the foresing between the basel and antimolism lines, and between the booten than and termon, are considerably darker than the molism mos. The outer half of the hind dung from the posterolism to the rargin is lastered.

go ,II, autummalis Dannshl. That, 4,1939.47, n, 3d. Lasto surmer broot, noticeably small or than the rimes gover dien,



700t.316. p.1.

inclognatha Lolarer,

nomoralia Mabricius. 1774. At. 1775. . A.A. = griscalis Schiff. Tim Yer. 1775.p. 120.

aberrational forms ste,

acmoralis "abr. (griscalis Schiff) --- bypical form - fore is garay-by a it's three transverse lines.

ab. clara L moke. Mij schr. Hat. (1946) 1949. 90. p. 195.
Forovings paler, more yellow-brown, Wie beings also paler them is to a by icel work.

ab, approximate Cockepte. Int. Co.10,1.69,0.164, (Tig. W tri.vol. 24, 0.1.) On the forevings the postmodica (second) line is displace towards the line of and united to it along the costs. The postmodica line touches the line of lab short instead of running some distance external to it, all the lines are this conturn usual.



ab grational forms etc.

cribrumalio Tbo. -- typical form -- icrovio | bono-drib , with a public black spots in place of the postmolian and subtorminal lime.

sb. nigrostriata Urbahn, Stett. Tht. 1.1909.100.p. 555.
The black discoidal spot of the fore tings white orith hourset spot in the set-midian row, by a black streak.

no. Obsoleta Lemente. Miji schm. Int. (1.55. ly 5.00. n.1)).
Torrendings without the lise of all motour the transverse without the lise of all motous the lements. In this Sutch Coscariotion Lements with the care the care through

Ab, basiling ata in mota, dijeschr. Jet, (1946) lije a., a.lije.
n the fewerings basilas the troops of strict is smota, the fewering line at the base (see antonalise).

This means that the tree lines join above the inner margin and best again before in the broading busilines the bove the inner margin to that the broad both the postmedian line arranging to the inner margin to the level for lovest projection of the antemplian riggs gline. This means that the two lines join above the inner margin and best part again before reaching the inner margin.

nb.reducta Lemico. Mij kom, Ant. (1920) 1949.90.135. The row of chert strips-spots (in the place of the protection was , in the st.

ub, grisoscons Lem low, dij sehr, lab. (Ly 16) llj49. N.p. 136. The ground colour of the forevilage wit be emblice, but lunker, gradict is eal un. Hin bings also ladane, procedially along the margin.

Toct. 318.

Paracolax Tubner.

lerivalis Hubner, Sanal. Hur. Somost. 1796. mal. 1.6.4.1.

aberrational forms etc.

lorivelis Unbner. - typical form -- forestings yellow-brown title last and the theory times transverse lines. Timbrings with two transverse lines in the coloured figure the puter one an almost contain enaggeration.

ab.delicata Cannell. But. J. 1925. 39. p. 12. Ground colour light yellow-brown, the dark atoms on the fore days completely absent All the lines very delicate and fine but shape and distinct.

ab. flangalis launchl. Ent. 1.1925.39. p.12.

Lark brown, thickly dusted tith black-brown atoms, broadened marking elements, in the outer area a row of dark brown spots offen appearing almost like a ban.

ab. suffuse Lampke. Fijlschr. Ent. (1946) 1949. 90, p. 196.
The ground colour strongly suffused with lant, therefore more limby brome, the rest normal. The typical form has a yellou-brown ground, and consequently halve.

ab. latelinests Lempks. Tijlschr, Int. (1946) 1949.90.p.136. The transverse lines strikingly elargel, the rost nomal.

ab. signate Lampho. Tijdschr. at. (1945) 1949.90.p.135. The subterminal line distinct, borlered with Carl.

ab. obsolete Lempke. Rijdschu. Ent. (1946) 1949.90. p. 137. The contral mot of the forewings absolete.

The impartiance of the foreving fails.

ab. Lilinoata Lempito. Tijlschr. Tht. (1946) 1947. (4.7.1)7. the transverse lines on the Sore and higheings fail but the control spet is present.

ab, misora tannehl, Mat. 4,1926.40.p.398.

Small specimens with normal ground colour, or grey-brown lusts; but completally markingless; the tranverse lines as rell as the discoiled spot have disappeared.

Hin wings also unicolorous grey-brown.

ab. alternalis Danushl. That. I. 1926. M. n. 398.

In the forevings only the mildle field is state-brown extrel, but botal and outer fields of normal colour, therefore paler. Timbulage with the batal half, real to transverse line, similarly strongly dusted. All markings are attached to the

ab, virgata locci,

Draudt's description in Spits says the forevings that a visit shall be but we a stripe, lusky central area, and on the hindrings a lusky basel brown. I have not seen the original, the form must be estimably similar to the process alternalis Dannehl.

ab, approximate Chalmers-Hunt, Wittom, 1961. W. ... - 19. pl. 7. f. 14. in the forevings the first and second lines are now beavily marked an object closer together than normally. In the himbrings the transverse line is placed close enough to the base so as to almost connect with the discoidal spot, and nearly forms a continuation of the first line of the form ing.

ab, innototalis Klemensiswicks, Spraw, Cou, Tispogr, Galtow, 1915, 47. n. 117.

ab. esernyi Skala. Erb. Ert. Abt. Landesnus, Brull, 1936. 10.3.p. 71.



- barbalis Charek, Ican 17 , 1.j. ... Frechib die Tubres, Jand. Tur. Brook, 1/jé. n.d. t."

ab reasional Posts abo.

birbalis Cleret. Indical our -- the figure is less so this part of the constituted is all male error, is is considered, and the constituted is male brownish-gray, with three trains are but, and other .

Hubn, pectitalis in Samul. Tur, Selmett, is of a darker gray but, and other of the error of the error of the artist evaggerates in some copies and not in others. It our the error of the error of the insect is much paler so it is quite over to our the color of these old torks. I make treats pectitalis as an accordance with the ground colour lark gray to dark brown-gray, here is is is made a train the treat.

ab. cinerca Loupko. Tijlschr. at. (1946) 1,49.90.4.197. Foreviags pure nule greg, without rellowish or brownish tint.

.b. signata Lempite. Tiglschr. Art. (1944) 1949. ph. c. 177. The transverse lines standing out shamply and contracting.

ab. longoulate Lambia. Mijuschr. Int. (1,40) ly 10.00. n. 197. The control spot of the foresting fails, the rest normal.

no, Posoleto Lompite, Hijlseim, int. (1944) 1949, Jr. 117. 11 the markings obselves. Germin, by Member "absoleti" to a file a set of the physical and the set of the physical and the set of the physical and the set of the second of the secon

who constituted the anticoics. But the population, in the all late is all a small in the supplication of the angle touching the fine is a line in a supplication of the angle touching the fine is all lunth. I have not as a the original.

filomula Johini. ie for .1/75.p./k. = filomulamin Tubuch. Johnl. hur. Wordth.l/ /-/...

berrational dams ste.

flowell 's'diff. typical form --- prome show light part of ' fill or li with the margine, uspecially at spec, solli melson, to brack to religion of the sine with light prov.

so, on cura Lamaka. Mij being lat. (1945) 15 (1945), 170, 170.
The ground colour of the forestings but her district of the political file.

ab, grisea Lamke, (girsea in error,) Tiplechr. Mt. (1)46 1/0, gl. 1,1)1.

Around colour of the fore in a greg (mostly ruther lamb), differ the tipte.

The tro black noints in the environment the firm is a divert,

ub, dignate. Lempks, Tijduchr, Dat. (1946) 194, 99, m. 191.
Torsvings with whitish subterminal line. Throught this is is is dead ont.

